

ἌΤΛΑΣ ΟΥΡΑΝΙΟΣ,

The COELESTIAL ATLAS;

OR, A NEW

E P H E M E R I S

For the YEAR of our LORD 1796.

Being the

BISSEXTILE, or LEAP-YEAR.

Wherein are contained

The Heliocentrick and Geocentrick Places of the Planets,
the ECLIPSES of the Luminaries, and other remarkable PHENO-
MENA that will happen this Year.

Carefully computed

From the genuine TABLES of Dr. EDMUND HALLEY,
those of Professor MAYER, and other the latest and most correct
ASTRONOMICAL TABLES.

46-6-24-124 ALSO

A Complete ALMANACK, containing the FEASTS and FASTS
of the Church of ENGLAND; the Times of the LUNATIONS;
the Rising and Setting of the Sun, Moon, and Planets, &c.

Adapted to the

Meridian and Latitude of the Royal Observatory of
GREENWICH.

To which are added

Several useful TABLES: AS, a TABLE of the Sun's
semi-diurnal Arcs, by which the Times of the Sun's Rising and
Setting may be known by Inspection, on every Day in the Year, and
in any Part of GREAT-BRITAIN or IRELAND; a TIDE-TABLE,
and a very correct one of the Eclipses of JUPITER's first Sat-
ellite; a TABLE of the Sun's Right-Ascension; various exact
the most remarkable fixed Stars, corrected from Mr. FLAMSTEED's
Catalogue; and, lastly, a correct TABLE of Latitudes and
Longitudes of the most remarkable Places in the World.

By ROBERT WHITE,

Teacher of the Mathematicks

Ὁς ἐστὶν διευκρινῆσαι τὰς ἀστρονομίας.

The FORTY-SEVENTH IMPRESSION.

L O N D O N :

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Chronological Notes for the Year 1796.

Golden Number	- - 11	Septuagesima Sunday	Jan. 24
Cycle of the Sun	- - 13	Shrove Sunday	Feb. 7
The Epact	- - 20	Easter Day	Mar. 27
Dominical Letter	- CB	Whit Sunday	May 15
Number of Direction	- 7	Trinity Sunday	May 22
Roman Indiction	- - 14	Advent Sunday	Nov. 27

Astronomical CHARACTERS explained.

♈ Aries	♋ Cancer	♎ Libra	♏ Capricorn
♉ Taurus	♌ Leo	♍ Scorpio	♐ Aquarius
♊ Gemini	♍ Virgo	♏ Sagittary	♑ Pisces
♄ Saturn	☉ Sol (the Sun)	☾ Luna (the Moon)	♃ Herschel,
♃ Jupiter	♀ Venus	♊ Moon's N. Node	the New or
♂ Mars	☿ Mercury	♋ her S. Node	Georgian Planet.
♄ Conjunction when Planets are in the same Sign, Deg. Min. &c.			
* Sextile when 2 Signs dist.		△ Trine when 4 Signs dist.	
□ Quartile when 3 Signs dist.		♌ Opposition when 6 Signs dist.	

Of the Four Quarters of the Year 1796.

	d	h	m
THE Spring Quarter begins	March 19	8	42 aftern.
The Summer Quarter begins	June 20	6	36 aftern.
The Autumnal Quarter begins	Sept. 22	8	29 morn.
The Winter Quarter begins	Dec. 21	1	7 morn.

THE beautiful Planet VENUS will be an Evening Star till August the 5th; and after that Time she will be a Morning Star to the Year's End.

JUPITER will be an Evening Star till February the 20th; then a Morning Star till the 31st Day of August, at which Time he becomes an Evening Star, and so continues to the Year's End.

The NAMES of the Learned JUDGES of the LAW.

I. Right Hon. Alexander Wedderburne Lord Loughborough, Lord High Chancellor of Great Britain.

Right Honourable Sir Richard Pepper Arden, Knt. Master of the Rolls.

II. In the } Right Hon. Lord Kenyon, L. C. J. Sir W. H. Ashurst, Knt.
K. Bench. } Sir Soulden Lawrence, Knt. Sir Nash Grose, Knt.

III. In the } Sir James Eyre, Knt. L. C. J. Sir Giles Rooke, Knt.
C. Pleas. } John Heath, Esq. Sir Francis Buller, Bart.

IV. In the } Sir Arch. Macdonald, Kt. L. C. B. Sir Beaumont Hotham, Kt.
Exchequer } Sir Richard Perryn, Knt. Sir Alex. Thompson, Knt.

Sir John Scott, Knt. Attor. General; Sir John Mitford, Knt. Solic. Gen.

A TABLE of TERMS and Returns for the Year 1796.

Hilary Term begins Jan. 23, ends Feb. 12.

Returns or Effoign-days.				Exc.	Ret.	Ap.	W. D.
In eight Days of St. Hilary,	-	-	Jan. 20	21	22	23	Saturday
In fifteen Days of St. Hilary	-	-	27	28	29	30	Saturday
On the Mor. of the Purif. of the Bl. V. M.	Feb. 3			4	5	6	Saturday
In eight Days of the Purif. of the Bl. V. M.			9	10	11	12	Friday

Easter Term begins April 13, ends May 9.

In fifteen Days of Easter	-	April 10	11	12	13	Wedn.
From Easter Day in three Weeks	-	17	18	19	20	Wedn.
From Easter Day in one Month	-	24	25	26	27	Wedn.
From Easter Day in five Weeks	-	May 1	2	3	4	Wedn.
On the Mor. of the Ascension of the Lord		6	7	8	9	Monday

Trinity Term begins May 27, ends June 15.

On the Morrow of the Holy Trinity,	-	May 23	24	25	27	Friday.
In eight Days of the Holy Trinity,	-	29	30	31	J. 1	Wedn.
In fifteen Days of the Holy Trinity,	-	June 5	6	7	8	Wedn.
From the Day of the Holy Trin in 3 Weeks	-	12	13	14	15	Wedn.

Michaelmas Term begins Nov. 7, ends Nov. 28.

On the Morrow of All Souls	-	Nov. 3	4	5	7	Monday
On the Morrow of St. Martin	-	12	13	14	15	Tuesday
In eight Days of St. Martin	-	18	19	20	21	Monday
In fifteen Days of St. Martin	-	25	26	27	28	Monday

N. B. No Sitings in Westminster-Hall on the Second of February, Ascension-day, and Midsummer-day.

The Exchequer opens eight Days before any Term begins; except Trinity, before which it opens but four Days.

Note, The first and last Days of every Term, are the first and last Days of Appearance.

BIRTH-DAYS of the ROYAL FAMILY.

KING GEORGE III. June 4, 1738	Prince Aug. Fred. Jan. 27, 1773
Prince of Wales, Aug. 12, 1762	Prince Adolph. Fred. Feb. 24, 1774
Duke of York, August 16, 1763	Princess Mary, April 25, - 1775
Duke of Clarence, Aug. 21, 1765	Princess Sophia, Nov. 3, - 1777
Princess Royal, Septem. 29, 1766	Princess Amelia, Aug. 7, - 1783
Prince Edward, Nov. 2, - 1767	Queen Charlotte, May 19, 1744
Prs. Augusta Sophia, Nov. 8, 1768	Prs. Augusta of Brun. Aug. 11, 1737
Prs. Elizabeth, May 22, - 1770	Duke of Gloucester, Nov. 25, 1743
Prince Ernest Augustus, June 5, 1771	

SOVEREIGNS of EUROPE, their Accession, &c.

Kingdoms, &c.	To whom subject.	When born.	Began to reign.
England, &c.	George III.	June 4, 1738	Oct. 25, 1760
France	Catharine II.	May 2, 1729	July 9, 1762
Russia	Charles IV.	Nov. 11, 1748	Dec. , 1788
Spain	Mary	Dec. 7, 1734	Feb. 24, 1777
Portugal	Frederic IV.	Sept. 25, 1744	Aug. 17, 1786
Prussia	Christian VII.	Jan. 29, 1749	Jan. 14, 1766
Denmark & Norway	Gustavus IV.	Nov. 1, 1778	Mar. 20, 1792
Sweden	Francis II.	Feb. 12, 1767	Mar. 1, 1792
Germany	Stanislaus III.	Jan. 17, 1732	Nov. 25, 1764
Poland	William V.	March 8, 1748	Oct. 11, 1751
Holland	Kius VI.	Dec. 27, 1717	Feb. 18, 1775
Papedom	Victor	June 26, 1726	Mar. 20, 1773
Sardinia	Selim III.	July 17, 1761	April 7, 1789
Ottoman Empire			

The FULL WEIGHT of the Coins, with the LEAST WEIGHT allowed to pass of the Gold Coin.

GOLD.		Wt. allowed.	Full Wt.	SILVER.		Full Wt.
		dwt. gr.	dwt. gr.			dwt. gr.
Guinea,	-	5 8	5 9 $\frac{3}{4}$	A Crown,	-	19 8 $\frac{1}{2}$
Half Guinea,	-	2 16	2 16 $\frac{1}{2}$	Half Crown,	-	9 16 $\frac{1}{2}$
Quarter Guinea,	-	1 8	1 8 $\frac{1}{2}$	Shilling,	-	3 20 $\frac{1}{2}$
				Six Pence,	-	1 22 $\frac{1}{2}$

According to the above proportions it appears, that the value of a lb. of Silver is 62s. or 3l. 2s. and of a lb. of gold is 44½ guineas, or 46l. 14s. 6d. Also that the oz. of silver is 5s 2d. and the oz. of gold 3l. 17s. 10½d. So that the value of the standard gold is 15 times that of the silver, and 14th more.

A TABLE of the **KINGS** and **QUEENS** of **ENGLAND**
since the **CONQUEST**.

Kings and Queens	Born A.D.	Began their Reign	Reigned Y. M. D.	Age	Rem. Deaths and Dethroned	Where buried
Will. Conq.	1027	1066 Oct. 14	20 10 26	60	Burst by Leap.	Caen, Norm
Will. Rufus	1057	1087 Sept. 9	12 10 24	43	Slain accidentally.	Winchester
Henry I.	1068	1100 Aug. 2	35 3 29	77		Reading
Stephen	1105	1135 Dec. 1	18 10 24	49		Feverham
Henry II.	1133	1154 Oct. 25	34 8 11	55		Fonteveraud
Richard I.	1156	1189 July 6	9 9 0	43	Slain with an Arrow.	Fonteveraud
John	1165	1199 April 6	17 6 13	50		Worcester
Henry III.	1207	1216 Oct. 19	56 0 28	65		Westminster
Edward I.	1239	1272 Nov. 16	34 7 23	67		Westminster
Edward II.	1284	1307 July 7	19 6 18	43		Gloucester
Edward III.	1312	1327 Jan. 25	50 4 27	63		Westminster
Richard II.	1366	1377 June 21	22 3 8	33	Dep. & murd.	Westminster
Henry IV.	1367	1399 Sept. 29	13 5 20	46		Canterbury
Henry V.	1389	1413 Mar. 20	9 5 11	33		Westminster
Henry VI.	1421	1422 Aug. 31	18 6 4	40	Dep. & murd.	Windfor
Edward IV.	1442	1461 Mar. 4	22 1 5	41		Windfor
Edward V.	1471	1483 April 9	0 2 15	12	Murder'd.	Not known
Richard III.	1443	1483 June 22	2 2 0	42	Slain in Battle.	Leicester
Henry VII.	1456	1485 Aug. 22	23 8 0	52		Westminster
Henry VIII.	1492	1509 April 22	37 9 6	55		Windfor
Edward VI.	1537	1547 Jan. 28	6 5 8	15		Westminster
Mary I.	1516	1553 July 6	5 4 11	42		Westminster
Elizabeth	1533	1558 Nov. 17	44 4 7	69		Westminster
James I.	1566	1603 Mar. 24	22 0 3	58		Westminster
Charles I.	1600	1625 Mar. 27	23 10 3	48		Windfor
Charles II.	1630	1649 Jan. 30	36 0 7	54		Westminster
James II.	1633	1685 Feb. 6	4 0 7	67	Abdicated.	St. Germain
Mary II.	1662	1689 Feb. 13	5 10 15	32		Westminster
William III.	1650	1689 Feb. 13	13 0 23	52		Westminster
Anne	1665	1702 Mar. 8	12 4 24	49		Westminster
George I.	1660	1714 Aug. 1	12 10 10	67		Hanover
George II.	1683	1727 June 11	33 4 14	77		Westminster
George III.	1738	1760 Oct. 25	Crowned Sept. 22, 1761.			

Above you view the Rise and Fall of Kings,
Whose Fate sometimes a useful Lesson brings,
Well if all Men could profit from the past!
Each know his Duty, each excel the last,
And justly execute his stated Task.

A TABLE of the most Reverend, Right Reverend, and Reverend, the ARCHBISHOPS, BISHOPS and DEANS, exercising Ecclesiastical Jurisdiction, 1796.

BISHOPS.	Sees.	Date.	Succeeded.	DEANS.
Dr. John Moore	Bangor	1775	Ewer deceased	
Arch-Bishop	Canterb. A. B.	1783	Cornwallis dec.	Dr. Cornwall
Dr. Will. Markham	Chester	1771	Keene translat.	
Arch-Bishop	York A. B.	1777	Drummond de.	Dr. J. Fountayne
Dr. Beilby Porteus	Chester	1776	Markham tran.	
	London	1787	Lowth deceas.	Bishop Pretyman
	Londaff	1769	Shipley trans. d	
Hon. Dr. S. Barrington	Salisbury	1782	Hume dec.	
	Durham	1791	Thurlow dec.	Bishop Cornwallis
	Litch & Cov.	1771	Egerton trans.	
Hon. Dr. B. North	Worcester	1774	Johnson deceas.	
	Winchester	1781	Thomas deceas.	Dr. Newton Ogle
Sir W. Ashburnham	Chichester	1754	Mawson trans.	Mr. Combe Miller
Dr. Charles Moss	St. David's	1766	Lowth trans.	
	Bath & Wells	1774	Willes decease	Ld. Fr. Seymour
	St. David's	1774	Moss trans.	
H. Dr. James Yorke	Gloucester	1779	Warburton dec.	
	Ely	1781	Keene deceased	Dr. W. Cooke
Dr. Richard Hurd	Litch & Cov.	1775	B. North tr.	
	Worcester	1781	B. North tr.	Dr. Onslow
Dr. John Butler	Oxford	1777	Lowth trans.	
	Hereford	1788	Harley deceas.	Dr. N. Wetherell
Dr. John Warren	St. David's	1779	Yorke trans.	
	Bangor	1783	Moore trans.	Dr. Tho. Lloyd
Dr. J. Cornwallis	Litch & Cov.	1781	Hurd trans.	Dr. Bapt. Proby
	Bristol	1782	Newton dec.	
Dr. Lewis Bagot	Norwich	1783	Yonge dec.	
	St. Asaph	1790	Hallifax dec.	Mr. W. D. Shipley
Dr. Richard Watfon	Londaff	1782	Barrington tr.	Dr. R. Price, Pr.
Dr. Edward Smalwell	St. David's	1783	Warren trans.	
	Oxford	1788	Butler trans.	Dr. Cyril Jackson
Dr. G. Pretyman	Lincoln	1787	Thurlow tran.	Sir Ri. Kaye, Bt.
Dr. John Douglas	Carlisle	1787	Law dec.	
	Salisbury	1791	Barrington tra.	Dr. John Ekins
Dr. William Cleaver	Chester	1788	Porteus tran.	Dr. G. Cotton
Dr. Samuel Horsley	St. David's	1788	Smalwell tr.	
	Rochester	1793	Thomas dec.	Dr. T. Dampier
Dr. Richard Beadon	Gloucester	1789	Hallifax tran.	Dr. Josiah Tucker
Dr. E. V. Vernon	Carlisle	1791	Douglas trans.	Dr. Isaac Milner
Dr. Charles Sutton	Norwich	1792	Horne dec.	Dr. John Hallam
Dr. Wm. Butler	Exeter	1792	Ross dec.	Dr. C. Harward
Hon. Dr. Wm. Stuart	St. David's	1793	Horsley trans.	Mr. Wollaston, P.
Dr. Spencer Madan	Bristol	1792	Bagot trans.	
	Peterborough	1794	Hinchliffe dec.	Dr. Peter Perkar
Dr. Regi. Courtenay	Bristol	1794	Madan trans.	Dr. Joseph Turner
	Westminster	1793	Thomas dec.	Bishop Horsley
	Windfor	1788		Bishop Sutton

In the course of this year there will happen four eclipses, three of the sun, and one of the moon; but none of them visible in these parts.

I. *January 10*, Sol is eclipsed, at 5 minutes past our 6 in the morning, and consequently invisible to all the northern parts of the earth; but in the southern regions it will be a very great eclipse, and in some parts central and annular, the breadth of the annulus being about half a digit on all sides.

II. *July 4*, Sol is eclipsed at 1 minute past our 11 at night, at which time this eclipse is both central and total on the meridian in longitude $164\frac{1}{2}$ degrees west, and latitude $36\frac{1}{2}$ degrees north. Consequently this eclipse will be visible to most parts of the great South Sea.

III. *December 14*, the Moon is partially eclipsed, invisible, in the afternoon, as follows:

The Beginning is at 1h 9m afternoon

The Middle - 2 21

The end of the eclipse 3 34

Digits eclipsed $6^{\circ} 1'$ on the moon's northern limb.

This eclipse is not visible to our island, nor to most parts of our hemisphere; but the moon rises eclipsed at the Orkney Isles; and it will be visible to the whole continent of Asia, and to most parts of the great Pacific Ocean.

IV. *December 29*, the Sun is eclipsed about our 6 in the morning, which is a little before sun-rise. This will be an annular eclipse to the inhabitants of the great South Sea, the breadth of the annulus being about half a degree on all sides. The sun will be centrally eclipsed on the meridian at our 3h 54 minutes in the morning, in longitude $91\frac{1}{2}$ degrees east, and latitude $65\frac{1}{2}$ degrees south.

Obliquity of the Ecliptic. 1796. Equation of Equinoctial Points.

23° 27' 52".9	-	January	1,	-	16".8
23 27 53. 5	-	April	1,	-	17. 3
23 27 54. 1	-	July	1,	-	17. 7
23 27 54. 8	-	October	1,	-	17. 9
23 27 55. 5	-	Decemb.	1,	-	18. 0

The LUNATIONS.

Last quarter the 2d day, at 2 minutes past 1 morning.

New Moon the 10th day, at 5 minutes past 6 morning.

First quarter the 17th day, at 27 minutes past 5 afternoon.

Full Moon the 24th day, at 10 minutes past 10 morning.

Last quarter the 31st day, at 2 minutes past 9 night.

M	Sundays & other	☉	☉	☉'s	☉'s	☉ rises	☉	Clock
D	remark. days	rises	sets	declin.	declin.	& sets	South	bef. ☉
1	Circumcision	8 5	3 55	23 s 1	2 n 48	11 a 58	5 m 2	4' 0"
2		8 4	3 56	22 36	1 s 50	morn.	6	4 28
3	2 Sun. a. Christ.	8 4	3 56	22 50	6 18	1	6 51	4 56
4		8 3	3 57	22 44	10 28	2 11	7 33	5 23
5	Old Chri. Day	8 2	3 58	22 37	14 14	3 15	8 15	5 50
6	Epiphany	Tw. day	3 59	22 30	17 25	4 20	8 5	6 17
7		8 0	4 0	22 23	19 53	5 22	9 45	6 43
8	Lucian	8 0	4 0	22 15	21 31	6 25	10 33	7 9
9		7 59	4 1	22 6	22 11	7 19	11 22	7 34
10	1 S. aft. Epiph.	7 58	4 2	21 58	21 47	☉ sets	0 a 12	7 59
11	Plow Monday	7 57	4 3	21 48	20 20	5 a 26	1 2	8 23
12	Old New Yea. d.	7 56	4 4	21 39	17 52	6 28	1 52	8 46
13	Cam. T. b. Hila.	7 54	4 6	21 29	14 29	7 39	2 41	9 9
14	Oxf. Term beg.	7 53	4 7	21 18	10 21	8 53	3 29	9 31
15		7 52	4 8	21 7	5 41	10 6	4 16	9 53
16		7 51	4 9	20 56	0 39	11 23	5 3	10 14
17	2 S. aft. Epiph.	O. 12 d.	4 10	20 44	4 n 31	morn.	5 52	10 34
18	Q. Char. b. d. k.	Prisca	4 12	20 32	9 32	0 39	6 43	10 53
19		7 47	4 13	20 20	14 7	1 58	7 37	11 11
20	Fabian	7 46	4 14	20 7	17 57	3 20	8 34	11 29
21	Agnes	7 44	4 16	19 54	20 41	4 40	9 34	11 46
22	Vincent	7 42	4 17	19 40	22 4	5 53	10 35	12 7
23	Hil. Term beg.	7 41	4 19	19 26	21 55	6 55	11 36	12 18
24	Septuages. Sun.	7 40	4 20	19 12	20 19	☉ rises	morn	12 33
25	Conv. of St. Paul	7 38	4 22	18 57	17 27	5 a 47	0 35	12 46
26		7 37	4 23	18 42	13 38	7 3	1 30	12 59
27	Pr. As. Fred. b.	7 35	4 25	18 27	9 14	8 18	2 21	13 13
28		7 34	4 26	18 11	4 32	9 29	3 8	13 23
29		7 32	4 28	17 55	0 s 14	10 39	3 53	13 34
30	K. Cha. L. mas.	7 31	4 29	17 39	4 52	11 47	4 36	13 43
31	Sexagesim. Sun.	7 29	4 31	17 22	9 13	morn.	5 19	13 52
Days	Day	Length	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	h
	increas.	of Day.	long. ♀	long. ♂	long. ♂	long. ☉	long. ♀	sets.
1	0 8	7 50	11 18	16 29	1 51	10 54	2 43	13 13
7	0 16	8 0	11 32	17 0	4 33	17 1	5 13	13 9
13	0 28	8 12	11 45	17 32	7 15	23 10	14 44	17 33
19	0 44	8 28	11 59	18 4	9 59	29 10	24 16	6 33
25	1 0	8 44	12 12	18 36	12 43	50 21	30 48	28 14

1796.

January.

9

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. D's node	h's latitude	u's latitude	δ's latitude	♀'s latitude	♂'s latitude
1	5 59	6 1	2 10	20 35	18 40	0 41	1 14	1 28	1 4
7	5 56	6 4	2 9	20 18	1 47	0 41	1 13	1 33	1 35
13	5 52	6 8	2 7	19 57	1 45	0 42	1 1	1 36	1 56
19	5 46	6 14	2 5	19 38	1 44	0 42	1 10	1 36	2 5
25	5 39	6 21	2 3	19 19	1 42	0 42	1 8	1 33	1 59

Days	☉'s longitude	☽'s long.	☽'s latitude	h's long.	u's long.	δ's long.	♀'s long.	♂'s long.
1	10 54 19	4 44	5 6	7 11 54	10 54	4 11 5	29 47	2 12
2	11 55 30	17 4	5 17	7 5	11 7	5 3	1 2	3 45
4	12 56 41	29 9	5 13	7 47	11 20	6 5	2 17	5 19
5	13 57 52	11 11	5 4	7 43	11 34	6 44	3 32	6 54
6	14 59 4	22 56	4 27	7 40	11 47	7 19	4 47	8 29
7	16 0 16	4 46	3 46	7 37	12 1	7 54	6 2	10 4
8	17 1 23	16 37	2 55	7 34	12 14	8 29	7 17	11 49
9	18 2 39	28 34	1 56	7 31	12 28	9 4	8 32	13 16
10	19 3 50	10 38	0 52	7 28	12 41	9 39	9 47	14 53
11	20 5 1	22 51	0 16	7 25	12 55	10 14	11 1	16 30

12	21 6 12	5 15	1 24	7 22	13 9	10 49	12 17	18 8
13	22 7 22	17 51	2 29	7 19	13 23	11 24	13 32	19 46
14	23 8 32	0 40	3 27	7 16	13 37	11 58	14 47	21 24
15	24 9 41	13 41	4 16	7 14	13 51	12 33	16 2	23 3
16	25 10 48	26 58	4 52	7 11	14 5	13 7	17 17	24 43

17	26 11 54	10 20	5 13	7 8	14 19	13 42	18 31	26 23
18	27 13 0	24 16	5 17	7 6	14 35	14 36	19 46	28 3
19	28 14 5	8 18	5 1	7 4	14 47	14 52	21 1	29 44
20	29 15 9	22 35	4 28	7 2	15 2	15 25	22 15	1 26
21	30 16 11	7 11	3 16	7 0	15 16	15 59	23 30	3 8

22	1 17 13	21 39	2 31	6 58	15 30	16 33	24 45	4 51
23	2 18 13	6 18	1 15	6 56	15 44	17 7	25 59	6 35
24	3 19 13	20 55	0 15	6 54	15 57	17 41	27 14	8 19
25	4 20 11	5 22	1 24	6 53	16 12	18 15	28 29	10 3
26	5 21 8	19 33	2 37	6 52	16 26	18 49	29 43	11 48

27	6 22 5	3 25	3 38	6 51	16 40	19 21	0 58	13 33
28	7 23 1	16 55	4 25	6 50	16 54	19 56	2 12	5 18
29	8 23 56	0 1	4 57	6 49	17 9	20 30	3 2	7 4
30	9 24 50	12 45	5 13	6 48	17 23	21 3	4 41	18 49
31	10 25 43	25 10	5 14	6 47	17 38	21 37	5 56	20 35
32	11 26 35	7 18	5 1	6 46	17 52	22 10	7 10	22 21

Days	☽'s sets	☽'s rises	☽'s sets	☽'s rises	h's declin.	u's declin.	δ's declin.	♀'s declin.	♂'s declin.
1	6 a 33	2 m 21	5 a 26	7 m 41	19 n 52	18 s 11	12 s 2	21 s 30	24 s 32
7	6 15	1 15	5 42	7 56	19 51	17 48	13 12	19 58	24 31
13	5 56	2 9	5 59	sets	19 40	17 25	14 1	17 57	23 40
19	5 38	2 3	6 17	4 a 14	19 48	17 1	15 23	15 37	21 54
25	5 21	1 57	6 35	4 a 40	19 48	16 36	16 21	13 2	19 10

10 February hath xxix Days. White.

The LUNATIONS.

New Moon the 8.h day, at 0 minutes past 11 night.
 First quarter the 16th day, at 34 minutes past 1 morning.
 Full Moon the 22 d day, at 2 minutes past 11 night.

M	Sundays & other	☉	☾	☉'s	☾'s	☾ rises	☾	Clock
D	remark. days	rises	sets	declin.	declin.	& sets	South	bef. ☉
1		7 27	4 33	17 s 5	13 s 9	0 m 53	6 m 2	14 1
2	Purif. or Candi.	7 25	4 35	16 48	16 32	1 59	6 46	14 8
3	Blaise	7 24	4 36	16 30	19 14	3 4	7 32	14 15
4		7 22	4 38	16 12	21 9	4 5	8 19	14 20
5	Agatha	7 20	4 40	15 54	22 6	5 4	9 8	14 25
6		7 19	4 41	15 56	22 2	5 55	9 58	14 30
7	Quinq. Shro. S	7 17	4 43	15 17	20 53	6 41	10 49	14 33
8		7 15	4 45	14 58	18 40	☾ sets	11 40	14 36
9	Shrove Tuesday	7 13	4 47	14 39	15 28	5 a 22	☾ a 31	14 37
10	As. Wednesday	7 11	4 49	14 20	11 27	6 36	1 20	14 38
11		7 9	4 51	14 0	6 47	7 51	2 9	14 39
12	Hil. Term ends	7 8	4 52	13 40	1 44	9 9	2 57	14 38
13	Old Canol. day	7 6	4 54	13 20	3 a 28	10 26	3 46	14 37
14	☉ Sun. in Lent	Valen.	4 56	13 0	8 33	11 43	4 36	14 34
15	[Ca. T. d.m.]	7 2	4 58	12 39	13 13	morn	5 29	14 32
16		7 0	5 0	12 18	17 10	1 3	6 24	14 28
17	Ember Week	6 58	5 2	11 50	20 9	2 24	7 21	14 24
18		6 56	5 4	11 36	21 53	3 35	8 20	14 18
19		6 54	5 6	11 15	22 12	4 41	9 20	14 13
20		6 51	5 8	10 54	21 6	5 37	10 18	14 6
21	☉ Sun. in Lent	6 51	5 9	10 32	18 42	6 20	11 14	13 59
22		6 49	5 11	10 10	15 15	☾ rises	morn	13 51
23	[A.F.b.]	6 47	5 13	9 48	11 2	5 a 55	0 7	13 43
24	St. Mathia. Pr.	6 45	5 15	9 26	6 22	7 9	0 57	13 34
25		6 43	5 17	9 4	1 31	8 21	1 44	13 24
26		6 41	5 19	8 42	3 s 17	9 30	2 29	13 14
27		6 39	5 21	8 19	7 50	10 40	3 13	13 3
28	☉ Sun. in Lent	6 37	5 23	7 57	11 59	11 46	3 57	12 52
29		6 35	5 25	7 34	15 37	morn	4 41	12 40
Day	Length	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	H
increas.	of day	long. ♀	long. ♀	long. ♂	long. ☉	long. ♀	long. ♂	sets
1 24	9 8	12 11 28	19 15 15	15 57	12 27	14 57	28 35	3 m 8
7 45	9 26	12 41	19 45	18 43	18 32	24 32	0 8 10	2 44
2 7	9 49	12 54	20 17	21 31	24 36	4 8 7	6 11 27	2 20
2 29	10 10	13 8	20 49	24 20	☉ 39	13 43	14 5 1	1 57
2 51	10 34	13 21	21 21	27 11	6 41	23 21	18 9	1 36

1796.

February.

11

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. D's node	h's latitude	u's latitude	δ's latitude	♀'s latitude	♂'s latitude
1	5 30	6 30	2 0	18 56	18 41	0 43	1 n 5	1 s 27	1 s 27
7	5 21	6 39	1 59	18 37	1 59	0 43	1 2	1 19	0 33
13	5 12	6 40	1 58	18 18	1 37	0 44	0 59	1 8	0 n 47
19	5 0	7 0	1 57	17 59	1 36	0 44	0 56	0 55	2 19
25	4 50	7 10	1 56	17 40	1 34	0 45	0 51	0 40	3 29

Days	☉'s longitude	☽'s long.	♂'s latitude	h's long.	u's long.	δ's long.	♀'s long.	♂'s long.
1	12 27 27	19 11 16	4 n 35	6 45	18 21 7	22 11 44	2 25	2 7
2	13 28 18	17 7	3 57	6 45	18 21 23	17 9	39	25 53
3	14 29 8	12 56	3 10	6 44	18 35 23	50 10	54	27 37
4	15 29 57	24 49	2 14	6 44	18 50 24	23 12	8	29 48
5	16 30 45	6 49	1 11	6 43	10 4 24	56 13	22	0 59
6	17 31 32	19 0	0 5	6 43	19 18 25	27 14	38	2 38
7	18 32 18	1 26	1 s 3	6 4	19 33 26	2 15	5	4 16
8	19 33 2	14 6	2 9	6 4	19 47 26	54 17	4	5 51
9	20 33 45	27 3	3 10	6 43	20 1 27	7 18	18	7 22
10	21 34 26	10 16	4 1	6 44	20 16 27	30 19	32	8 48
11	22 35 6	23 43	4 41	6 44	20 30 28	12 20	46	10 10
12	23 35 44	7 22	5 5	6 45	20 44 28	44 22	0 11	27
13	24 36 20	21 12	5 11	6 46	20 59 29	16 23	44	39
14	25 36 54	58 9	5 0	6 47	21 13 29	48 24	28	13 44
15	26 37 27	19 13	4 10	6 48	21 27 30	20 25	42	14 41
16	27 37 58	3 11 20	3 45	6 49	21 42 0	52 26	55	15 29
17	28 38 26	17 31	2 45	6 50	21 56 1	24 28	9	10 8
18	29 38 53	19 42	1 35	6 51	22 10 1	56 29	23	16 39
19	30 39 17	15 53	0 19	6 53	22 25 2	27 36	17	2
20	1 39 40	0 0	0 n 57	6 54	22 39 2	58 1	30	17 15
21	2 40 1	14 1	2 9	6 56	22 53 3	29 3	3	17 R 17
22	3 40 20	27 51	3 13	6 57	23 8 4	0 4	17	17 7
23	4 40 37	11 27	4 4	6 58	23 22 4	31 5	30	16 48
24	5 40 53	24 47	4 41	7 1	23 36 5	2 6	44	16 21
25	6 41 7	7 49	5 2	7 3	23 51 5	32 7	57	15 46
26	7 41 19	20 33	5 7	7 5	24 5 0	3 9	10	15 4
27	8 41 29	2 56	4 58	7 7	24 19 6	33 10	23	14 15
28	9 41 38	15 6	4 35	7 10	24 33 7	3 11	30	13 15
29	10 41 46	37 4	4 1	7 12	24 47 7	33 12	49	12 19

Days	☉'s sets	☽'s rises	♂'s sets	♀'s sets	h's declin.	u's declin.	δ's declin.	♀'s declin.	♂'s declin.
1	5 2	1 m 50	6 2 57	5 2 34	19 n 49	16 s 6	17 s 25	9 46	14 s 52
7	4 46	1 4	7 15	6 12 19	50 15	37 18	16 6	48	10 28
13	4 46	1 39	7 34	6 40 19	52 15	12 19	3 3	44	6 6
19	4 40	1 33	7 53	6 46 19	55 14	45 19	46 0	36	3 0
25	6 20	1 27	8 13	6 19 19	58 14	17 20	24 2 n	33	2 24

The LUNATIONS.

Last quarter the 1st day, at 10 minutes past 6 afternoon.

New Moon the 8th day, at 0 minutes past 1 afternoon.

First quarter the 16th day, at 48 minutes past 8 morning.

Full Moon the 23d day, at 51 minutes past 0 noon.

Last quarter the 31st day, at 24 minutes past 2 afternoon.

M	Sundays & other	☉	☉	☉'s	☉'s	☉rises	☉	Clock
D	remark. days	rises	sets	declin.	declin.	& sets	South	bef. ☉
1	David	6 33	5 27	7 s 11	18 s 34	0 m 52	5 m 26	12 27
2	Chad	6 31	5 29	6 48	20 45	1 56	6 13	12 15
3		6 29	5 31	6 25	22 2	2 55	7 1	12 2
4		6 27	5 33	6 2	22 19	3 50	7 51	11 48
5		6 25	5 35	5 29	21 32	4 38	8 42	11 34
6	for Midl. Sund	6 23	5 37	5 15	19 40	5 17	9 33	11 19
7	Perpetua	6 21	5 39	4 52	16 47	5 52	10 24	11 4
8		6 19	5 41	4 29	12 57	6 19	11 15	10 49
9		6 17	5 43	4 5	8 22	☉ sets	0 a 5	10 34
10		6 15	5 45	3 42	3 16	6 a 55	0 45	10 18
11		6 13	5 47	3 18	2 n 5	8 16	1 45	10 1
12	Gregory	6 11	5 49	2 54	7 23	9 36	2 36	9 45
13	for Sund. in Lent	6 9	5 51	2 31	12 19	10 56	3 29	9 28
14		6 7	5 53	2 7	16 33	morn	4 25	9 11
15		6 5	5 55	1 43	19 47	0 18	5 22	8 54
16		6 3	5 57	1 20	21 48	1 35	6 20	8 36
17	St. Patrick	6 1	5 59	0 56	22 27	2 42	7 19	8 18
18	Ed. K. W. S. Ca.	5 59	6 1	0 32	21 42	3 39	8 17	8 0
19	Oxf. T. e. [T. e.]	5 57	6 3	0 9	10 39	4 25	9 13	7 42
20	for Palm Sun.	5 55	6 5	0 n 15	16 31	5 1	10 6	7 24
21	Benedict	5 53	6 7	0 39	12 33	5 31	10 56	7 5
22		5 51	6 9	1 2	8 1	5 57	11 43	6 46
23		5 49	6 11	1 26	3 12	☉ rises	morn	6 28
24	Maundy Thurs.	5 47	6 13	1 50	1 s 40	7 a 19	0 29	6 9
25	Good Frid. Ann.	5 45	6 15	2 12	6 23	8 30	1 13	5 50
26	for Lady D.	5 43	6 17	2 37	10 45	9 35	1 57	5 32
27	Easter Day	5 41	6 19	3 0	14 38	10 46	2 42	5 13
28	Easter Monday	5 39	6 21	3 23	17 53	11 51	3 27	4 54
29	Easter Tuesday	5 37	6 23	3 47	20 22	morn	4 13	4 36
30		5 35	6 25	4 10	21 57	0 54	5 1	4 17
31		5 33	6 26	4 31	22 35	1 51	5 51	3 59
Days	Day	Length	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.
	increas.	of day	long. ♀	long. ♂	long. ♂	long. ☉	long. ♀	long. ♀
1	3 11	10 55	13 11 32	21 47	29 34	11 42	11 23	12 21
7	3 35	11 19	13 46	22 16	21 27	17 42	11 2	6 44
13	3 59	11 43	13 55	22 51	5 21	23 41	20 42	27 23
19	4 33	12 7	14 13	23 23	8 17	29 38	0 24	15 40
25	4 47	12 31	14 26	23 55	11 15	35 3	10 7	2 38

1790.

March.

13

Day	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. D's node	h's latitude	u's latitude	δ's latitude	♀'s latitude	♂'s latitude
1	4 43	7 17	1 55	17 24	1 s 33	0 s 45	0 n 45	0 s 26	3 n 40
7	4 30	7 30	1 56	17 5	1 32	0 46	0 42	0 8	2 50
13	4 17	7 43	1 57	16 46	1 30	0 47	0 36	0 n 12	1 25
19	4 4	7 56	1 58	16 27	1 29	0 47	0 30	0 32	0 1
25	3 50	8 10	2 0	16 8	1 28	0 48	0 22	0 53	1 s 7
Days	☉'s longitude	D's long.	D's latitude	h's long.	u's long.	δ's long.	♀'s long.	♂'s long.	
1	11 41 52	8 55	3 n 16	7 11 15	25 2	8 3	14 2	11 19	
2	12 41 57	20 44	2 24	7 18	25 16	8 32	15 15	10 18	
3	13 42 0	2 37	1 24	7 21	25 30	9 2	16 28	9 17	
4	14 42 1	14 38	0 21	7 24	25 44	9 31	17 40	8 17	
5	15 42 1	26 53	0 s 45	7 27	25 58	10 0	18 53	7 20	
6	16 41 59	9 26	1 50	7 30	26 12	10 29	20 6	6 28	
7	17 41 55	22 19	2 51	7 33	26 26	10 58	21 18	5 42	
8	18 41 49	5 34	3 44	7 36	26 40	11 27	22 31	5 2	
9	19 41 42	19 9	4 26	7 40	26 54	11 55	23 43	4 27	
10	20 41 33	3 3	4 57	7 43	27 7	12 23	24 56	3 56	
11	21 41 21	17 11	5 3	7 47	27 21	12 51	26 8	3 32	
12	22 41 7	18 27	4 55	7 50	27 35	13 19	27 20	3 16	
13	23 40 51	15 47	4 28	7 54	27 48	13 47	28 32	3 7	
14	24 40 33	0 11 5	3 44	7 58	28 2	14 14	29 44	3 4	
15	25 40 12	14 18	2 46	8 2	28 16	14 41	30 56	3 6	
16	26 39 49	28 25	1 39	8 6	28 29	15 8	2 8	3 13	
17	27 39 24	12 24	0 26	8 10	28 43	15 35	3 20	3 26	
18	28 38 56	26 15	0 n 47	8 14	28 57	16 2	4 32	3 45	
19	29 38 26	9 58	1 57	8 18	29 10	16 28	5 43	4 9	
20	0 37 53	23 32	2 59	8 23	29 24	16 54	6 55	4 38	
21	1 37 18	6 56	3 51	8 27	29 37	17 19	8 6	5 11	
22	2 36 41	20 10	4 29	8 32	29 50	17 45	9 17	5 48	
23	3 36 2	3 11	4 52	8 36	30 3	18 10	10 28	6 29	
24	4 35 21	15 58	5 1	8 41	0 16	18 35	11 39	7 14	
25	5 34 38	28 31	4 54	8 46	0 29	19 0	12 50	8 2	
26	6 33 53	10 51	4 34	8 51	0 42	19 24	14 1	8 53	
27	7 33 6	22 57	4 1	8 56	0 55	19 48	15 12	9 47	
28	8 32 17	4 54	3 18	9 1	1 8	20 11	16 23	10 45	
29	9 31 26	16 44	2 27	9 6	1 21	20 35	17 33	11 46	
30	10 30 34	28 32	1 30	9 11	1 34	20 59	18 44	12 47	
31	11 29 40	10 24	0 28	9 16	1 47	21 22	19 55	13 54	
Days	☉ rises	☉ sets	☉ rises	☉ sets	h's declin.	u's declin.	δ's declin.	♀'s declin.	♂'s declin.
1	6m 4	1 m 22	8 a 30	6 m 2	20 n 1	13 s 54	20 s 53	5 n 9	3 s 56
7	5 45	1 16	8 45	5 36	20 5	13 26	21 20	8 12	6 48
13	5 26	1 9	9 10	5 20	20 10	12 59	21 53	11 9	9 3
19	5 6	1 1	9 31	5 11	20 15	12 31	22 17	13 57	9 59
25	4 47	0 52	9 51	5 5	20 21	12 4	22 35	16 33	9 36

The LUNATIONS.

New Moon the 7th day, at 3 minutes past 12 night.
 First quarter the 14th day, at 2 minutes past 4 afternoon.
 Full Moon the 22d day, at 28 minutes past 3 morning.
 Last quarter the 30th day, at 51 minutes past 7 morning.

M D	Sundays & other remark days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ South	C. de bef. ☉	
1		5 32	6 28	4 n 56	22 s 11	2 m 40	6 m 41	3 41	
2		5 30	6 30	5 19	20 43	3 23	7 31	3 23	
3	1 or Low Sun.	Richard	6 32	5 42	18 12	3 50	8 22	3 5	
4	St. Ambrose	5 26	6 34	6 5	14 44	4 29	9 12	2 47	
5	Old Lady Day	5 24	6 36	6 28	10 24	4 54	10 2	2 29	
6	Ox. & Ca. T. beg.	5 22	6 38	6 50	5 25	5 17	10 52	2 12	
7		5 20	6 40	7 13	0 0	(☉ sets)	11 4	1 55	
8		5 18	6 42	7 35	5 n 31	7 a 21	0 a 34	1 38	
9		5 16	6 44	7 57	10 49	8 46	1 28	1 21	
10	1st Sun. aft. Easter	5 14	6 46	8 19	15 30	10 10	2 24	1 5	
11		5 12	6 48	8 41	19 12	11 32	3 22	0 49	
12		5 10	6 50	9 3	21 40	morn	4 22	0 33	
13	East. Term beg.	5 8	6 52	9 25	22 41	0 44	5 22	0 17	
14		5 6	6 54	9 46	22 14	1 46	6 21	0 2	
15		5 5	6 55	10 8	20 27	2 35	7 18	0 a 13	
16		5 3	6 57	10 29	17 32	3 14	8 1	0 27	
17	3d Sun. aft. Easter	5 1	6 59	10 50	13 45	3 43	9 1	0 42	
18		4 59	7 1	11 11	9 23	4 9	9 48	0 55	
19	Alphege	4 57	7 3	11 31	4 39	4 30	10 33	1 9	
20		4 55	7 5	11 52	0 s 13	4 49	11 17	1 22	
21		4 53	7 7	12 12	5 0	5 7	morn	1 34	
22		4 51	7 9	12 32	9 31	(☉ rises)	0 0	1 46	
23	St. George	4 50	7 10	12 52	13 37	8 a 40	0 44	1 58	
24	2d Sun. aft. East.	4 48	7 12	13 12	17 7	9 47	1 29	2 9	
25	St. Mark. Pres.	4 46	7 14	13 31	19 53	10 51	2 15	2 20	
26	[Ma. b.]	4 44	7 16	13 50	21 47	11 49	3 2	2 30	
27		4 42	7 18	14 9	2 45	morn	3 50	2 40	
28		4 40	7 20	14 28	22 41	0 43	4 40	2 49	
29		4 39	7 21	14 46	21 34	1 28	5 30	2 58	
30		4 37	7 23	15 5	19 27	2 5	6 19	3 6	
Days	Day increas.	Length of day	Helioc. long. ♀	Helioc. long. ♀	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ♂	h sets
1	5 15	12 59	14 11 42	24 33 32	14 m 44	12 29	21 28	21 54	11 a 41
7	5 39	13 23	14 55	25 41 7	17 45	18 23	19 12	8 47	11 23
13	6 1	13 45	15 9 25	37 20	48 24	15 10	57 26	52 11	4
19	6 23	14 7	15 22 26	9 23	53 0 m	6 20	43 17	5 10	45
25	6 45	14 29	15 36 26	41 27	0 5	56 0 m	28 10	33 10	26

1796. W

April.

15

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. D's node	h's latitude	u's latitude	δ's latitude	♀'s latitude	♂'s latitude
1	3 33	8 27	2 3	15 46	1 26	0 49	0 11	1 17	2 2
7	3 17	8 43	2 8	15 27	1 25	0 50	0 1	1 36	2 28
13	3 2	8 58	2 11	15 8	1 24	0 51	0 16	1 55	2 36
19	2 47	9 13	2 15	14 48	1 23	0 53	0 23	2 12	2 24
25	2 26	9 34	2 25	14 29	1 22	0 54	0 3	2 27	1 54
Days	☉'s longitude	☽'s long.	☽'s latitude	h's long.	u's long.	δ's long.	♀'s long.	♂'s long.	
1	12 28 44	22 24	0 35	9 11 21	1 59	21 14	21 18	3 15 8	
2	13 27 47	4 39	1 38	9 27	2 12 22	22 22	22 15	16 13	
3	14 26 48	17 13	2 38	9 32	2 24 22	23 23	23 17	24	
4	15 25 47	0 11	3 32	9 38	2 36 22	24 24	24 35	18 40	
5	16 24 44	13 34	4 16	9 44	2 49 23	25 25	25 45	19 57	
6	17 23 40	27 23	4 46	9 50	3 1 23	26 33	26 55	21 16	
7	18 22 34	11 36	5 0	9 56	3 13 23	27 34	27 42	36	
8	19 21 25	26 8	4 55	10 2	3 25 24	28 14	28 19	28	
9	20 20 14	10 51	4 30	10 8	3 37 24	29 34	29 25	22	
10	21 19 1	25 36	3 48	10 14	3 49 24	30 53	30 32	26 40	
11	22 17 46	10 11	2 50	10 20	4 1 25	31 13	31 41	28 17	
12	23 16 29	24 48	1 42	10 26	4 13 25	32 31	32 50	29 47	
13	24 15 10	9 5	0 28	10 32	4 24 25	33 48	33 59	19 18	
14	25 13 48	23 5	0 46	10 38	4 36 26	34 6	34 8	2 51	
15	26 12 24	6 50	1 56	10 44	4 47 26	35 23	35 26	4 28	
16	27 10 58	20 20	2 58	10 51	4 59 26	36 40	36 25	6 2	
17	28 9 30	3 36	3 49	10 57	5 10 26	37 56	37 33	7 40	
18	29 7 59	16 40	4 28	11 3	5 22 27	38 12	38 41	9 20	
19	30 6 26	29 32	4 52	11 10	5 33 27	39 27	39 11	10 2	
20	1 4 51	12 13	5 11	11 16	5 44 27	40 42	40 56	12 46	
21	2 3 14	24 43	4 56	11 23	5 55 27	41 56	41 14	14 31	
22	3 1 35	7 3	4 37	11 29	6 6 28	42 10	42 16	16 17	
23	3 59 54	19 12	4 5	11 36	6 17 28	43 16	43 19	18 5	
24	4 58 12	1 12	3 23	11 43	6 28 28	44 17	44 26	19 55	
25	5 56 28	13 4	2 32	11 50	6 38 28	45 18	45 32	21 47	
26	6 54 43	24 53	1 35	11 57	6 48 29	46 19	46 40	23 41	
27	7 52 56	6 40	0 33	12 4	6 58 29	47 11	47 20	25 36	
28	8 51 7	18 32	0 30	12 11	7 8 29	48 22	48 21	27 33	
29	9 49 17	0 31	1 33	12 18	7 18 29	49 32	49 22	29 31	
30	10 47 26	12 45	2 33	12 25	7 28 29	50 43	50 34	1 31	
Days	☽'s rises	☽'s rises	♀'s sets	♂'s rises	h's declin.	u's declin.	δ's declin.	♀'s declin.	♂'s declin.
1	4 m 25	0 m 42	10 a 16	4 m 59	20 n 28	11 s 33	23 s 1	19 n 17	7 s 48
7	4 6	0 31	10 36	4 53	20 34	11 7 23	18 21	19 5	12
13	3 45	0 19	10 55	4 47	20 40	10 42 23	34 23	2 1	52
19	3 25	0 6	11 12	4 41	20 46	10 18 23	50 24	24 2	9
25	2 5	11 52	11 27	4 37	20 53	9 55 24	6 25	24 6	44

The LUNATIONS.

New Moon the 7th day, at 45 minutes past 8 morning.
 First quarter the 13th day, at 2 minutes past 12 night.
 Full Moon the 21st day, at 43 minutes past 6 afternoon.
 Last quarter the 29th day, at 36 minutes past 9 night.

M	Sundays & other	☉	☉	☉'s	☉'s	☉ rises	☉	Clock
D	remark. days	rises	sets	declin.	declin.	& sets	South	aft. ☉
1	Rog. S. Phil. &	4 35	7 25	15 n 23	16 s 21	2 m 37	7 m 8	3 13
2	[St. Jam.	4 34	7 26	15 40	12 23	3 3	7 57	3 20
3	Inven. of Crofs	4 32	7 28	15 58	7 42	3 25	8 45	3 26
4		4 30	7 30	16 15	2 28	3 47	9 35	3 32
5	Aken. Holy Th.	4 28	7 32	16 32	3 n 4	4 8	10 25	3 37
6	John Ev. a. P. L.	4 27	7 33	16 49	8 35	4 30	11 17	3 42
7		4 25	7 35	17 5	13 42	☉ sets	0 a 13	3 46
8	Sun. of Aken.	4 23	7 37	17 22	18 0	9 a 14	1 11	3 49
9	Easter T. ends	4 22	7 38	17 37	21 6	10 33	2 13	3 52
10		4 20	7 40	17 53	22 43	11 41	3 15	3 54
11		4 19	7 41	18 8	22 45	morn	4 17	3 56
12	Oxf. Te. c. O. d	4 17	7 43	18 23	21 17	0 38	5 16	3 57
13	[May d.	4 16	7 44	18 38	18 34	1 21	6 11	3 58
14		4 14	7 46	18 52	14 55	1 53	7 2	3 58
15	Whit Sunday	4 13	7 47	19 6	10 36	2 19	7 50	3 58
16	Whit Monday	4 11	7 49	19 20	5 55	2 40	8 35	3 57
17	Whit Tuesday	4 10	7 50	19 33	1 4	2 59	9 18	3 55
18	Ember Week	4 8	7 52	19 46	3 s 45	3 17	10 1	3 53
19	Queen Ch. b. d. Dunst.	7 53	19 59	8 21	3 35	10 44	3 50	
20		4 6	7 54	20 11	12 35	3 54	11 28	3 47
21		4 4	7 56	20 23	16 16	☉ rises	morn	3 44
22	Tr. S. Pm. E. b.	4 3	7 57	20 35	19 17	8 a 44	0 13	3 39
23	[Ca. T. d. m.	4 2	7 58	20 46	21 28	9 44	1 0	3 35
24		4 0	8 0	20 57	22 43	10 39	1 47	3 29
25	Oxf. Term beg.	3 59	8 1	21 8	22 58	11 26	2 36	3 24
26	Aug. Cor. Chr.	3 58	8 2	21 18	22 10	morn	3 25	3 17
27	Ve. Be. Tr. T. b.	3 57	8 3	21 28	20 20	0 6	4 14	3 11
28		3 56	8 4	21 38	17 34	0 40	5 3	3 3
29	1 S. T. K. Ch.	3 55	8 5	21 47	13 56	1 6	5 50	3 56
30	[2. s. s.	3 54	8 6	21 55	9 34	1 28	6 37	2 47
31		3 53	8 7	22 4	4 38	1 50	7 24	2 39
Day	Length	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	h
increaf.	of day	long. ♀	long. ♂	long. ♂	long. ☉	long. ♀	long. ♂	se s
1 7 7 14 51	15 11 47	27 22 13	0 f	11 m 46	10 m 13	8 9 36	10 a 7	
7 7 27 15 11	16 2	27 45	3 19	17 34	19 56	11 8 57	9 48	
13 7 45 15 20	16 16	28 17	6 32	23 21	29 41	19 11 2	9 28	
19 8 4 15 47	16 29	28 50	9 47	29 7	9 25	26 26 4	9 9	
25 8 19 16 3	16 43	29 22	13 4	4 53	19 4	28 24	8 48	

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May.

17

M	Day lig.	Daylig.	Durat.	Pl. C's	h's	u's	δ's	♀'s	♂'s
D	begins	ends	twilig.	node	latitude	latitude	latitude	latitude	latitude
1	2 6	9 57	2 37	14 26 10	1 8 21	0 8 55	0 8 55	2 n 39	1 8 7
7	1 44	10 19	2 48	13 51	1 20	0 56	1 13	2 47	0 7
13	1 10	10 45	3 5	13 32	1 19	0 58	1 33	2 52	0 n 55
19	0 48	11 20	3 32	13 13	1 19	0 59	1 55	2 52	1 44
25	All day light.			12 54	1 18	1 1	2 18	2 47	2 9

M	☉'s	☌'s	☌'s	h's	u's	δ's	♀'s	♂'s
D	longitude	long.	latitude	longit.	longit.	longit.	longit.	long.
B	8 11 45 34	25 17	3 8 27	12 11 32	7 38	29 49	25 11 12	3 8 33
2	12 43 40	8 11	4 12 12	12 39	7 48	29 57	26 17	5 35
3	13 41 45	21 16	4 45 12	12 46	7 58	0 42	27 22	7 40
4	14 39 48	5 28	5 3 12	12 54	8 7	0 10 48	26 9	48
5	15 37 50	19 47	5 3 13	1	8 17	0 16 29	31 21	56

6	16 35 51	4 30	4 43 13	8	8 27	0 22	0 36	14 5
7	17 33 50	19 28	4 4 13	16	8 36	0 27	1 40	16 14
B	18 31 47	4 11 33	3 7 13	23	8 45	0 31	2 44	18 24
9	19 29 43	19 35	1 58 13	30	8 54	0 34	3 47	20 34
10	20 27 37	4 26	0 4 13	38	9 3	0 37	4 51	22 45

11	21 25 29	18 59	0 n 38	13 45	9 12	0 39	5 54	24 56
12	22 23 20	3 12	1 52 13	52	9 21	0 40	6 58	27 7
13	23 21 9	17 2	2 58 14	0	9 29	0 39	8 129	17
14	24 18 56	0 12 31	3 52 14	7	9 37	0 38	9 3	1 12 26
B	25 16 41	13 41	4 32 14	15	9 45	0 36	10 6	3 34

16	26 14 25	26 34	4 58 14	22	9 53	0 34	11 7	5 41
17	27 12 7	9 12	5 8 14	30	10 1	0 31	12 9	7 46
18	28 9 47	21 38	5 4 14	37	10 9	0 28	13 11	9 49
19	29 7 26	3 53	4 46 14	45	10 16	0 25	14 12	11 50
20	II 0 5 3	16 0	4 15 14	52	10 24	0 21	15 13	13 49

21	1 2 40	27 59	3 33 15	0	10 31	0 16	16 13	15 45
B	2 0 14	9 12	2 42 15	8	10 38	0 10	17 13	17 39
23	2 57 48	21 41	1 44 15	16	10 45	0 3	18 12	19 30
24	3 55 21	3 29	0 42 15	24	10 52	29 45	19 11	18
25	4 52 53	15 18	0 23 15	32	10 59	29 45	20 10	23 4

26	5 50 24	27 11	1 26 15	39	11 5	29 35	21 8	24 47
27	6 47 54	9 13	2 27 15	47	11 11	29 24	22 6	26 27
28	7 45 23	21 28	3 23 15	55	11 17	29 13	23 3	28 4
B	8 42 52	3 59	4 10 16	3	11 23	29 2	24 8	29 38
30	9 40 20	16 52	4 46 16	10	11 29	28 51	24 57	1 9
31	10 37 48	0 1	5 8 16	18	11 35	28 38	25 53	2 38

M	☌	♂	♀	♂	h's	u's	δ's	♀'s	♂'s
D	rises	rises	sets	rises	declin.	declin.	declin.	declin.	declin.
1	2 m 44	11 a 35	11 a 38	4 m 29	20 n 59	9 s 34	24 s 23	26 n 1	11 n 40
7	2 23	11 17	11 45	4 27	21 6	9 14	24 41	26 15	16 36
13	2 10	10 57	11 49	sets	21 12	8 55	25 16	5 20	55
19	1 38	10 35	11 48	9 a 13	21 18	8 39	25 23	25 31	23 57
25	1 16	10 11	11 43	9 50	21 22	8 24	25 46	24 42	25 27

B

The LUNATIONS.

New Moon the 5th day, at 5 minutes past 4 afternoon.

First quarter the 12th day, at 33 minutes past 9 morning.

Full Moon the 20th day, at 12 minutes past 10 morning.

Last quarter the 28th day, at 45 minutes past 7 morning.

M	Sundays & other	☉	☉	☉'s	D's	D rises	D	Clock
D	remark. days.	rises	sets	declin.	declin.	& sets	South	aft. ☉
1	Nicomede	3 52	8 8	22 n 12	cn 42	2 m 10	8 m 12	2 30
2		3 51	8 9	22 19	6 10	2 31	9 2	2 20
3		3 50	8 10	22 27	11 28	2 52	9 54	2 10
4	Geo. III. b.	3 49	8 11	22 34	16 12	3 19	10 50	2 0
5	S. a. Trin. P.	Bonifa.	8 11	22 40	19 56	D sets	11 51	1 49
6	[En. Aug. b.	3 48	8 12	22 46	22 17	9 a 20	0 a 54	1 38
7		3 47	8 13	22 52	23 1	10 23	1 58	1 27
8		3 47	8 13	22 57	22 5	11 13	3 0	1 16
9		3 46	8 14	23 2	19 43	11 52	3 59	1 4
10		3 46	8 14	23 6	16 13	morn	4 53	0 52
11	St. Barnabas	3 45	8 15	23 10	11 58	0 19	5 43	0 40
12	Sun. af. Trin.	3 45	8 15	23 14	7 15	0 43	6 30	0 28
13		3 44	8 16	23 17	2 22	1 5	7 14	0 15
14		3 44	8 16	23 20	2 s 30	1 21	7 57	0 3
15	Trin. Term en.	3 44	8 16	23 22	7 11	1 39	8 39	0 b. 10
16		3 43	8 17	23 24	11 32	1 56	9 22	0 23
17	St. Alban	3 43	8 17	23 26	15 23	2 17	10 7	0 35
18		3 43	8 17	23 27	18 35	2 40	10 52	0 48
19	Sun. af. Trin.	3 43	8 17	23 28	21 0	3 8	11 39	1 1
20	Tra. Edw. KWS	3 43	8 17	23 28	22 31	D rises	morn	1 14
21	Longest Day	3 43	8 17	23 28	23 2	9 a 26	0 28	1 27
22		3 43	8 17	23 27	22 3	10 2	1 17	1 39
23		3 43	8 17	23 26	20 56	10 37	2 6	1 52
24	Walter. J. Bapt.	Midf.	8 17	23 25	18 24	11 6	2 55	2 5
25		3 43	8 17	23 23	15 0	11 29	3 42	2 17
26	Sun. af. Trin.	3 44	8 16	23 21	10 52	11 50	4 28	2 30
27		3 44	8 16	23 19	6 10	morn	5 14	2 42
28		3 44	8 16	23 16	1 5	0 9	6 0	2 54
29	St. Peter	3 45	8 15	23 12	4 n 13	0 28	6 47	3 6
30		3 45	8 15	23 8	9 28	0 50	7 37	3 18
M	Day	Length	Helio.	Helio.	Helio.	Helio.	Helio.	Helio.
D	increaf.	of day	long. h	long. U	long. ♂	long. ⊖	long. ♀	long. ♀
1	8 32	16	7 16	13 59	16 56	11 35	om 20	29 11
7	8 42	16 26	17 12	0 32	20 17	17 20	9 58	20 55
13	8 46	16 30	17 25	1 4	23 40	23 4	19 33	9 51
19	8 50	16 34	17 39	1 36	27 6	28 47	29 7	27 9
25	odec. 2	16 32	17 52	2 5	32 4	30 8	40 13	44 2

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June.

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M	Daylig. begins	Daylig. ends	Durat. twilig.	Pi, (C's node	h's latitude	24's latitude	δ's latitude	γ's latitude	♀'s latitude
1				12 32	1 17	1 3	2 46	2 33	2 3
7	All	day	light.	12 13	1 17	1 4	3 10	2 15	1 28
13				11 54	1 17	1 6	3 32	1 50	0 26
19				11 35	1 16	1 8	3 51	1 16	0 57
25				11 16	1 16	1 10	4 8	0 33	3 32

M	☉'s longitude	☽'s long.	☿'s latitude	♈'s long.	♉'s long.	♊'s long.	♋'s long.	♌'s long.	♍'s long.
1	11 35	14 13	5 13	16 26	11 41	28 25	26 48	4 26	4
2	12 32	41 28	5 0	16 34	11 46	28 11	27 43	5 28	
3	13 30	7 12	4 27	16 42	11 51	27 56	28 37	6 47	
4	14 27	32 27	3 35	16 50	11 56	27 40	29 31	8 1	
5	15 24	56 12	2 28	16 57	12 1	27 24	30 25	9 13	
6	16 22	19 28	1 10	17 5	12 6	27 18	1 18	10 23	
7	17 19	42 13	0 13	17 13	12 11	26 52	2 10	11 30	
8	18 17	4 28	1 33	17 21	12 15	26 35	3 2	12 33	
9	19 14	24 12	2 46	17 28	12 19	26 17	3 53	13 38	
10	20 11	44 26	3 46	17 36	12 23	25 59	4 43	14 28	
11	21 9	3 10	4 31	17 43	12 27	25 41	5 32	15 21	
12	22 6	21 23	5 1	17 51	12 31	25 23	6 21	16 10	
13	23 3	38 6	5 15	17 59	12 35	25 4	7 9	16 55	
14	24 0	54 18	5 13	18 7	12 38	24 45	7 55	17 30	
15	24 58	9 1	4 57	18 15	12 41	24 26	8 41	18 13	
16	25 55	24 13	4 28	18 22	12 44	24 7	9 26	18 4	
17	26 52	38 24	3 47	18 30	12 47	23 48	10 11	19 15	
18	27 49	51 6	2 57	18 38	12 50	23 29	10 55	19 39	
19	28 47	3 18	1 59	18 46	12 52	23 10	11 38	19 59	
20	29 44	14 0	0 57	18 54	12 54	22 51	12 19	20 14	
21	30 41	27 12	0 8	19 2	12 56	22 32	12 59	20 25	
22	1 38	39 24	1 14	19 10	12 58	22 13	13 39	20 31	
23	2 35	50 6	2 17	19 17	13 0	21 54	14 18	20 35	
24	3 33	2 18	3 14	19 25	13 2	21 35	14 56	20 29	
25	4 30	13 0	4 4	19 33	13 3	21 16	15 12	20 22	
26	5 27	25 13	4 42	19 41	13 4	20 58	16 6	20 11	
27	6 24	37 26	5 8	19 48	13 5	20 41	16 39	19 58	
28	7 21	49 9	5 18	19 55	13 5	20 25	17 11	19 35	
29	8 19	2 23	5 10	20 3	13 6	20 10	17 42	19 11	
30	9 16	14 7	4 45	20 11	13 7	19 56	18 12	18 43	

M	☉ rises	☽ rises	☿ sets	♈ sets	♈'s declin.	♉'s declin.	♊'s declin.	♋'s declin.	♌'s declin.
1	0 49	9 41	11 33	10 10	21 30	8 9	26 14	23 20	25 28
7	0 25	9 10	11 21	10 10	21 35	7 59	26 35	21 54	24 26
13	0 1	8 41	11 5	9 58	21 39	7 57	26 55	20 16	23 50
19	11 37	8 9	10 47	9 31	21 44	7 47	27 9	18 32	21 3
25	11 13	7 37	10 25	8 57	21 48	7 45	27 18	16 44	19 25

The LUNATIONS.

New Moon the 4th day, at 1 minute past 11 night.

First quarter the 11th day, at 23 minutes past 9 night.

Full Moon the 20th day, at 17 minutes past 1 morning.

Last quarter the 27th day, at 18 minutes past 3 afternoon.

M	Sundays & other	☉	☉	☉'s	☉'s	☉ rises	☉	Clock	
D	remark. days	rises	sets	declin.	declin.	& sets	South	bef. ☉	
1		3 46	8 14	23 n	4 14 n	20 1 m 13	8 m 29	3 30	
2	Visit. of B.V.M.	3 46	8 14	23	0 18	28 1 42	9 26	3 41	
3	6 Sun. af. Trin.	Do. d. b.	8 13	22	55 21	26 2 17	10 26	3 52	
4	Trans. St. Mar.	3 48	8 12	22	49 22	55 ☉ sets	11 30	4 3	
5	Cam. Com. Old	3 48	8 12	22	43 22	42 8 a 56	0 a 35	4 13	
6	[Midf.	3 49	8 11	22	37 20	53 9 41	1 37	4 23	
7	Thom. à Becket	3 50	8 10	22	31 17	43 10 16	2 35	4 33	
8	Cam. Ter. ends	3 50	8 10	22	24 13	35 10 41	3 29	4 42	
9		3 51	8 9	22	16 8	52 11 3	4 18	4 51	
10	7 Sun. af. Trin.	3 52	8 8	22	9 3	53 11 23	5 5	5 0	
11	Oxford Aft	3 53	8 7	22	0 1	57 11 40	5 49	5 8	
12		3 54	8 6	21	52 5	57 11 58	6 32	5 15	
13		3 55	8 5	21	43 10	26 morn	7 15	5 22	
14		3 56	8 4	21	34 14	26 0 17	7 59	5 29	
15	Swithin	3 57	8 3	21	24 17	49 0 40	8 45	5 35	
16	Oxford Ter. en.	3 58	8 2	21	14 20	27 1 6	9 31	5 40	
17	8 Sun. af. Trin.	4 0	8 0	21	4 22	13 1 37	10 20	5 45	
18		4 1	7 59	20	53 23	0 2 17	11 9	5 49	
19		4 2	7 58	20	42 22	44 3 7	11 59	5 53	
20	Margaret	4 3	7 57	20	31 21	24 ☉ rises	morn	5 56	
21		4 5	7 56	20	19 19	4 9 a 6	0 48	5 59	
22	Magdalen	4 6	7 54	20	7 15	50 9 31	1 36	6 1	
23		4 7	7 53	19	55 11	51 9 52	2 23	6 3	
24	9 Sun. af. Trin.	4 9	7 51	19	42 7	16 10 13	3 9	6 4	
25	St. James	4 10	7 50	19	29 2	17 10 30	3 55	6 4	
26	S. Anne	4 11	7 49	19	15 2 n	54 10 51	4 41	6 4	
27		4 13	7 47	19	2 8	4 11 14	5 29	6 4	
28		4 14	7 46	18	48 12	56 11 39	6 19	6 2	
29		4 16	7 44	18	33 17	12 morn	7 12	6 0	
30		4 17	7 43	18	19 20	31 0 5	8 9	5 58	
31	10 Sun. af. Trin.	4 18	7 41	18	4 22	32 0 51	9 10	5 55	
M	Day	Length	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	h
D	decreas.	of day	long. ♀	long. ♀	long. ♂	long. ☉	long. ♀	long. ♂	rises
1	0 4	16 30	13 11	6	2 41	4 2	10 13	18 12	0 20
7	0 12	16 22	18 19	3	13 7	34 15	57 27	42 17	44 1
13	0 24	16 10	18 33	3	46 11	7 21	40 7 12	6 45	1 38
19	0 38	15 56	18 46	4	18 14	42 27	24 16	41 28	28 1
25	0 54	15 40	19 0	4	50 18	19 3 37	7 26	70 24	7 0

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July.

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M	Daylig.	Daylig.	Durat.	Pl.	D's	h's	u's	δ's	♀'s	♂'s
D	begins	ends	twilig.		node	latitude	latitude	latitude	latitude	latitude
1					10 ²⁵ 57	1 16	1 12	4 19	0 20	3 59
7	All	day-	light.		10 37	1 16	1 13	4 27	1 23	4 48
13					10 18	1 15	1 14	4 31	2 36	4 42
19					9 59	1 15	1 17	4 31	3 56	4 46
25	0 45	11 7	3 20		9 40	1 15	1 18	4 29	5 19	2 21
M	☉'s	D's	D's	h's	u's	δ's	♀'s	♂'s		
D	longitude	long.	latitude	long.	long.	long.	long.	long.		
1	10 13 27	21 8 42	4 1	20 11 18	13 7	19 143	18 540	18 012		
2	11 10 40	6 11 28	3 0	20 25 13	7 19	29 19	6 17	39		
B	12 8 54	21 29	1 46	20 33 13	6 19	15 19	30 17	3		
4	13 5 8	6 23 35	0 24	20 40 13	6 19	2 19	53 16	24		
5	14 2 21	21 40	1 n 0	20 48 13	5 18	49 20	15 15	46		
6	14 59 35	6 51 33	2 18	20 55 13	5 18	37 20	15 15	9		
7	15 56 49	21 7	3 26	21 2 13	4 18	26 20	52 14	34		
8	16 54 3	5 11 17	4 19	21 9 13	3 18	16 21	7 43	59		
9	17 51 18	19 1	4 55	21 17 13	1 18	6 21	20 13	24		
B	18 48 31	2 19	5 14	21 24 12	59 17	57 21	31 12	50		
11	19 45 45	15 12	5 17	21 31 12	57 17	48 21	49 12	20		
12	20 42 59	27 44	5 4	21 39 12	55 17	46 21	47 11	51		
13	21 40 14	9 15 58	4 38	21 46 12	53 17	34 21	53 11	30		
14	22 37 27	22 0	3 59	21 53 12	51 17	29 21	57 11	11		
15	23 34 42	3 15 54	3 11	22 0 12	48 17	25 21	59 10	57		
16	24 31 56	15 43	2 15	22 7 12	45 17	21 21	59 10	49		
B	25 29 11	27 31	1 14	22 14 12	42 17	18 21	55 10	D 46		
18	26 26 25	9 25 11	0 9	22 21 12	39 17	16 21	47 10	48		
19	27 24 41	21 16	0 57	22 28 12	36 17	15 21	36 10	55		
20	28 20 57	3 11 19	2 1	22 35 12	32 17	D 14 21	23 11	8		
21	29 18 13	15 31	3 0	22 42 12	28 17	14 21	8 11	28		
22	Ω 0 15 29	27 54	3 51	22 49 12	24 17	15 20	51 11	55		
23	1 12 49	10 11 28	4 32	22 56 12	20 17	12 20	33 12	28		
B	2 10 8	23 17	5 1	23 3 12	16 17	20 20	14 13	6		
25	3 7 28	6 11 20	5 14	23 9 12	12 17	24 19	53 13	48		
26	4 4 49	19 40	5 11	23 15 12	7 17	28 19	29 14	36		
27	5 2 12	3 8 16	4 51	23 22 12	2 17	33 19	3 15	31		
28	5 59 35	17 10	4 13	23 28 11	57 17	39 18	35 16	33		
29	6 57 0	1 11 22	3 20	23 34 11	52 17	46 18	5 17	40		
30	7 54 26	15 50	2 12	23 41 11	47 17	54 17	33 18	52		
B	8 51 53	0 23 30	0 56	23 47 11	42 18	3 16	59 20	8		
M	u's	δ's	♀'s	♂'s	h's	u's	δ's	♀'s		
D	rises	sets	sets	rises	declin.	declin.	declin.	declin.		
1	10 a 48	1 m 49	10 a 0	4 m 50	21 n 51	7 44	27 22	14 n 56		
7	10 24	1 18	9 35	4 52	21 55	7 47	27 24	13 15		
13	9 59	0 50	9 5	3 28	21 58	7 53	27 23	11 46		
19	9 34	0 25	8 31	2 57	22 0	8 1	27 22	10 35		
25	9 10	0 2	7 55	2 41	22 2	8 12	27 20	9 49		

The LUNATIONS.

New Moon the 3d day, at 34 minutes past 6 morning.

First quarter the 10th day, at 9 minutes past 0 noon.

Full Moon the 18th day, at 23 minutes past 3 afternoon.

Last quarter the 25th day, at 30 minutes past 9 night.

M. D.	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ South	Clock bef. ☉
1	Trinitas Day	4 20	7 40	17 48	23 10	1 46	10 13	5 51
2		4 22	7 38	17 33	21 51	2 52	11 16	5 47
3		4 24	7 36	17 17	19 13	☾ sets	0 16	5 42
4		4 25	7 35	17 1	15 2	8 a 39	1 13	5 37
5		4 27	7 31	16 45	10 46	9 4	2 6	5 31
6	Transfiguration	4 28	7 32	16 23	5 44	9 25	2 55	5 25
7	11 S. a. Tri. Prs. [Amelia b.]	Na of J.	7 30	16 11	0 34	9 44	3 42	5 17
8		4 32	7 28	15 54	4 s 27	10 2	4 27	5 10
9		4 34	7 26	15 36	9 9	10 21	5 11	5 1
10	St. Lawrence	4 35	7 25	15 19	13 23	10 43	5 56	4 52
11	Prs. Brunf. b.	Do. d. e.	7 23	15 1	17 0	11 8	6 41	4 43
12	Pr. of Wales b.	O. Lam	7 21	14 43	19 52	11 38	7 28	4 33
13		4 43	7 19	14 24	21 53	morn	8 16	4 22
14	12 Sun. af. Tri. Assumption	4 42	7 18	14 6	22 56	0 16	9 5	4 11
15		4 44	7 16	13 47	22 57	1 1	9 55	3 59
16	Du. of York b.	4 46	7 14	13 28	21 54	1 55	10 45	3 47
17		4 48	7 12	13 8	19 49	2 57	11 34	3 34
18		4 50	7 10	12 49	16 46	☾ rises	morn	3 21
19		4 51	7 9	12 29	12 53	8 a 1	0 23	3 7
20		4 53	7 7	12 9	8 22	8 21	1 10	2 52
21	13 S. a. Tri. D. of [Claren. b.]	4 55	7 5	11 49	3 23	8 41	1 56	2 38
22		4 57	7 3	11 29	1 n 50	9 1	2 47	2 22
23		4 59	7 1	11 9	7 2	9 21	3 30	2 7
24	St. Bartholomew	5 1	6 59	10 48	11 58	9 45	4 19	1 51
25		5 2	6 58	10 27	16 21	10 15	5 11	1 34
26		5 4	6 56	10 6	19 52	10 51	6 6	1 18
27		5 6	6 54	9 45	22 13	11 59	7 4	1 1
28	14 Sun. a. Tri. John Bap. beh.	St. Au.	6 52	9 24	23 9	morn	8 5	0 43
29		5 10	6 50	9 2	22 32	0 38	9 6	0 25
30		5 12	6 48	8 41	20 26	1 48	10 6	0 7
31		5 14	6 46	8 19	17 4	3 8	11 4	oaf. 11
M. D.	Day Length decreas. of day	Helioc. long. ♀	Helioc. long. ♀	Helioc. long. ♂	Helioc. long. ♂	Helioc. long. ♀	Helioc. long. ♂	☾ rises
1	1 11 15 21	19 11 15	5 28	22 34	9 49	7 13	0 8 29	0 m 31
7	1 31 15 3	19 29 6	1 26	15 15	35 16	43 6	11 49	0 10
13	1 51 14 43	19 43 6	33 29	56 21	20 26	12 14	23 11	a 50
19	2 13 14 21	19 56 7	6 3	40 27	7 5	42 18	27 11	31
25	2 35 13 50	20 9 7	38 7	24 2	54 15	13 16	25 11	13

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August.

23

M	Day-lig	Day-lig	Durat.	Pl. D's	h's	u's	δ's	♀'s	♂'s
D	begins	ends	twilig.	node	latitude	latitude	latitude	latitude	latitude
1	1 23	10 34	2 58	5 18	1 10	1 20	4 24	6 44	0 36
7	1 47	10 13	2 46	8 59	1 16	1 21	4 18	7 33	0 40
13	2 9	9 51	2 34	8 40	1 16	1 23	4 11	7 53	1 28
19	2 29	9 31	2 25	8 21	1 16	1 24	4 3	7 45	1 46
25	2 47	9 13	2 18	8 2	1 16	1 20	3 54	7 15	1 38
M	☉'s	☽'s	☽'s	h's	u's	δ's	♀'s	♂'s	
D	longitude	long.	latitude	long.	long.	long.	long.	long.	
1	Ω 9 49 21	15 26 18	0 n 25 23 11 53	1 23	18 2 12	16 22	21 23	31	
2	10 46 50	0 Ω 7	1 45 24	0 11 31	18 22	15 45	22 53		
3	11 44 21	14 51	2 56 24	6 11 25	18 33	15 9	24 24		
4	12 41 53	29 21	3 55 24	12 11 19	18 44	14 33	26 5		
5	13 39 25	13 11 31	4 39 24	18 11 13	18 56	13 55	27 48		
6	14 36 59	27 17	5 4 24	24 11 7	19 9	13 18	29 32		
B	15 34 33	10 38	5 12 24	30 11 1	19 23	12 42	1 Ω 17		
8	16 32 8	23 34	5 4 24	36 10 54	19 37	12 5	3 6		
9	17 29 44	6 11 8	4 41 24	42 10 48	19 52	11 29	4 59		
10	18 27 21	18 23	4 6 24	48 10 41	20 8	10 54	6 55		
11	19 24 59	0 25	3 20 24	53 10 34	20 25	10 20	8 5		
12	20 22 38	12 17	2 27 24	59 10 27	20 42	9 47	10 51		
13	21 20 18	24 5	1 26 25	4 10 20	21 0	9 15	12 51		
B	22 17 58	5 55	0 24 25	10 10 13	21 19	8 45	14 52		
15	23 15 40	17 48	0 5 41	25 15 10	6 21	38 8	17 53		
16	24 13 23	29 50	1 44 25	20 9 58	21 57	7 51	18 54		
17	25 11 7	12 4	2 44 25	25 9 51	22 17	7 27	20 55		
18	26 8 52	24 31	3 36 25	30 9 44	22 38	7 5	22 56		
19	27 6 39	7 11	4 19 25	35 9 36	22 59	6 45	24 57		
20	28 4 28	20 6	4 49 25	40 9 29	23 21	6 28	26 57		
B	29 2 17	3 14	5 5 25	45 9 21	23 43	6 13	28 56		
22	0 0 9	16 3	5 5 25	50 9 14	24 5	6 0	30 54		
23	0 58 3	0 8	4 48 25	55 9 6	24 28	5 50	2 51		
24	1 55 58	13 51	4 14 26	0 8 59	24 52	5 42	4 47		
25	2 53 55	27 44	3 25 26	4 8 51	25 16	5 36	6 24		
26	3 51 55	11 14 8	2 23 26	9 8 43	25 41	5 33	8 34		
27	4 49 56	25 59	1 11 26	13 8 35	26 6	5 32	10 26		
B	5 47 59	10 18	0 n 5 26	17 8 27	26 32	5 34	12 17		
29	6 46 4	14 42	1 21 26	22 8 19	26 58	5 38	14 7		
30	7 44 11	0 Ω 8	2 32 26	26 8 11	27 24	5 45	15 56		
31	8 42 20	21 30	3 33 26	30 8 3	27 51	5 51	17 43		
M	u's	δ's	♀'s	♂'s	h's	u's	δ's	♀'s	♂'s
D	rises	sets	rises	sets	declin.	declin.	declin.	declin.	declin.
1	8 a 43	11 a 39	5 m 26	2 m 45	12 n 4	8 s 27	17 s 20	9 n 32	21 n 10
7	8 19	11 21	4 40	3 9	22 6	8 42	27 20	9 40	20 33
13	7 54	11 6	4 1	3 4	22 7	8 59	27 20	10 21	18 23
19	7 31	10 53	3 26	4 36	22 8	9 16	27 19	11 6	14 53
25	7 7	10 41	2 56	5 19	22 9	9 34	27 17	11 51	10 35

The LUNATIONS.

New Moon the 1st day, at 37 minutes past 3 afternoon.
 First quarter the 9th day, at 52 minutes past 5 morning.
 Full Moon the 17th day, at 14 minutes past 4 morning.
 Last quarter the 24th day, at 30 minutes past 3 morning.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ South	Clock aft. ☉	
1	Giles	5 16	6 44	7 n 57	12 n 42	☽ sets	11 m 59	0 30	
2	Long. bur. 1666	5 18	6 42	7 35	7 45	7 a 34	0 a 50	0 49	
3		5 20	6 40	7 13	2 31	7 53	1 38	1 8	
4	15 Sun. af. Tri.	5 22	6 38	6 51	2 s 41	8 12	2 25	1 27	
5		5 23	6 57	6 28	7 38	8 32	3 11	1 47	
6		5 25	6 35	6 6	12 8	8 52	3 56	2 7	
7	Enurhus	5 27	6 33	5 43	16 3	9 15	4 42	2 27	
8	Nativ. V. M.	5 29	6 31	5 21	19 13	9 44	5 29	2 47	
9		5 31	6 29	4 58	21 32	10 19	6 17	3 8	
10		5 33	6 27	4 35	22 54	10 59	7 5	3 29	
11	16 Sun. af. Tri.	5 35	6 25	4 12	23 14	11 51	7 55	3 49	
12		5 37	6 23	3 49	22 31	morn	8 45	4 10	
13		5 39	6 21	3 26	20 44	0 51	9 35	4 31	
14	Holy Cro's	5 41	6 19	3 3	17 57	1 58	10 24	4 52	
15		5 43	6 17	2 40	14 16	3 8	11 12	5 14	
16		5 45	6 15	2 17	9 50	4 22	morn	5 35	
17	Lambert	5 47	6 13	1 53	4 51	☽ rises	0 0	5 56	
18	17 Sun. af. Tri.	5 49	6 11	1 30	0 n 27	7 a 14	0 47	6 17	
19		5 51	6 9	1 7	5 50	7 35	1 35	6 38	
20	[Week	5 53	6 7	0 43	10 59	7 58	2 25	6 59	
21	St. Matthe. Em.	5 55	6 5	0 20	15 37	8 24	3 16	7 20	
22	St. Geo. III. cr.	5 57	6 3	0 s 3	19 23	8 59	4 10	7 41	
23		5 59	6 1	0 27	22 1	9 43	5 8	8 1	
24		6 1	5 59	0 50	23 17	10 39	6 8	8 22	
25	18 Sun. af. Tri.	Q.H.R.	5 57	1 14	23 3	11 45	7 8	8 42	
26	St. Cyprian	6 4	5 56	1 37	21 22	morn	8 8	9 2	
27		6 6	5 54	2 1	18 23	1 0	9 5	9 22	
28		6 8	5 52	2 24	14 22	2 20	9 59	9 41	
29	St. M. Eri. Ro. b	6 10	5 50	2 47	9 37	3 38	10 50	10 1	
30	St. Jerome	6 12	5 48	3 11	4 28	4 56	11 39	10 20	
M D	Day decreas.	Length of day	Helio. long. ♀	Helio. long. ♀	Helio. long. ♂	Helio. long. ☉	Helio. long. ♀	Helio. long. ♂	h rises
1	3	13 33	20 11 25	8 17	11 47	9 41	26 20	14 9	10 a 51
7	3	25 13	20 38	8 49	15 34	15 30	5 52	3 m 52	10 30
13	3	49 12	20 52	9 22	19 21	21 21	15 25	21 35	10 9
19	4	11 12	21 5	9 54	23 9	27 12	24 50	8 19	9 49
25	4	35 11	21 19	10 27	26 57	3 5	4 35	24 49	9 24

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September.

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M	Day	lig.	Day	lig.	Durat.	Pl. D's	h's	ll's	δ's	♀'s	♂'s
D	begins	ends.	twilig.			node	latitude	latitude	latitude	latitude	latitude
1	3	7	8	55	2	11	7 40	18 17	18 25	3 54	6 52
7	3	24	8	36	2	6	7 20	1 17	1 25	3 34	5 33
13	3	37	8	23	2	4	7 41	1 17	1 25	3 24	4 40
19	3	52	8	8	2	1	6 42	1 17	1 25	3 14	3 48
25	4	5	7	55	2	0	6 23	1 18	1 25	3 4	2 56

M	☉'s	D's	D's	h's	ll's	δ's	♀'s	♂'s
D	longitude	long.	latitude	long.	long.	long.	long.	long.
1	9 40 31	7 42	4 20	26 11 34	7 55	28 18	6 5	19 29
2	10 38 43	21 41	4 51	26 38	7 48	28 46	6 18	19 45
3	11 36 57	5 20	5 3	26 42	7 40	29 14	6 33	22 59
4	12 35 13	18 37	5 0	26 45	7 32	29 43	6 50	24 40
5	13 33 31	11 32	4 40	26 49	7 24	30 12	7 8	26 21
6	14 31 50	14 5	4 8	26 53	7 16	30 41	7 28	28 1
7	15 30 11	26 21	3 24	26 56	7 8	31 11	7 50	29 41
8	16 28 33	8 22	2 32	26 59	7 0	31 41	8 14	31 20
9	17 26 57	20 14	1 35	27 2	6 53	32 12	8 40	32 57
10	18 25 22	2 2	0 33	27 5	6 45	32 43	9 8	34 32
11	19 23 48	13 52	0 50	27 8	6 38	33 14	9 37	36 6
12	20 22 16	25 48	1 32	27 11	6 30	33 46	10 7	37 40
13	21 20 46	7 56	2 31	27 14	6 23	34 18	10 38	39 13
14	22 19 18	20 19	3 24	27 17	6 16	34 50	11 11	40 45
15	23 17 51	3 0	4 8	27 19	6 8	35 23	11 45	42 15
16	24 16 26	15 59	4 40	27 22	6 1	35 56	12 21	44 44
17	25 15 3	29 15	4 58	27 24	5 54	36 29	12 58	46 12
18	26 13 42	12 48	5 0	27 27	5 47	37 7	13 37	47 39
19	27 12 23	26 33	4 44	27 29	5 40	37 36	14 17	48 6
20	28 11 6	10 8	4 12	27 31	5 33	38 10	14 58	49 32
21	29 9 50	24 29	3 24	27 33	5 27	38 45	15 40	50 56
22	30 8 38	8 34	2 24	27 35	5 20	39 19	16 23	52 18
23	1 7 28	22 39	1 14	27 37	5 14	39 54	17 7	53 39
24	2 6 21	6 45	0 0	27 39	5 7	40 28	17 52	54 59
25	3 5 16	20 50	1 14	27 40	5 1	41 3	18 37	56 19
26	4 4 14	4 54	2 23	27 42	4 55	41 38	19 24	57 38
27	5 3 14	18 55	3 23	27 43	4 49	42 14	20 12	58 55
28	6 2 16	2 51	4 11	27 44	4 43	42 50	21 0	59 9
29	7 1 20	16 39	4 43	27 45	4 37	43 26	21 49	60 22
30	8 0 27	0 15	4 59	27 46	4 31	44 3	22 39	61 34

M	☿	♀	♂	h's	ll's	δ's	♀'s	♂'s
D	sets	sets	rises	declin.	declin.	declin.	declin.	declin.
1	5 m 6	10 a 30	2 m 31	7 a 8	22 9	9 55	27 s 11	12 n 34
7	4 39	10 22	2 16	6 59	22 8	10 13	27 2	12 58
13	4 14	10 17	2 6	6 49	22 9	10 30	26 48	13 6
19	3 48	10 13	2 1	6 38	22 9	10 45	26 29	12 56
25	3 23	10 10	3 1	6 27	22 9	10 59	26 4	12 25

The LUNATIONS.

New Moon the 1st day, at 59 minutes past 2 morning.

First quarter the 9th day, at 35 minutes past 1 morning.

Full Moon the 16th day, at 4 minutes past 4 afternoon.

Last quarter the 23d d. y, at 22 minutes past 10 morning.

New Moon the 30th day, at 18 minutes past 5 afternoon.

M	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☉'s declin.	☉ rises & sets	☉ South	Clock aft. ☉	
1	Remigius	6 14	5 46	3 34	0 48	☉ sets	0 a 25 10	30	
2	19 Sun. af. Tri.	6 16	5 44	3 57	5 56	6 a 42	1 11 10	57	
3		6 18	5 42	4 21	10 42	7 2	1 57 11	15	
4		6 20	5 40	4 44	14 55	7 26	2 43 11	33	
5		6 22	5 38	5 7	18 26	7 51	3 30 11	50	
6	Faith	6 24	5 36	5 30	21 5	8 23	4 18 12	7	
7		6 26	5 34	5 53	22 48	9 1	5 6 12	24	
8		6 28	5 32	6 16	23 30	9 48	5 51 12	40	
9	20 Sun. af. Tri.	St. Den.	5 30	6 39	23 8	10 44	6 45 12	56	
10	Or. & Cam. T. b	O. Mic.	5 28	7 2	21 43	11 48	7 35 13	11	
11		6 34	5 26	7 24	19 17	morn	8 23 13	26	
12		6 36	5 24	7 47	15 54	0 55	9 11 13	40	
13	Tr. K. Edw. Con.	6 38	5 22	8 9	11 43	2 8	9 59 13	54	
14		6 40	5 20	8 31	6 52	3 23	10 46 14	8	
15		6 42	5 18	8 54	1 33	4 39	11 34 14	20	
16	21 Sun. a. Tri.	6 44	5 16	9 16	3 n 58	☉ rises	morn 14	33	
17	Etheldred.	6 45	5 15	9 38	9 24	6 a 8	0 24 14	44	
18	St. Luke	6 47	5 13	9 59	14 25	6 33	1 16 14	55	
19		6 49	5 11	10 21	18 38	7 6	2 11 15	6	
20		6 51	5 9	10 43	21 42	7 47	3 0 15	16	
21		6 53	5 7	11 4	23 22	8 37	4 9 15	25	
22		6 55	5 5	11 25	23 30	9 43	5 9 15	33	
23	22 Sun. a. Trin.	6 57	5 3	11 46	21 7	10 55	6 9 15	40	
24		6 59	5 1	12 7	19 24	morn	7 7 15	47	
25	K. Geo. 3. sec.	Crispin	4 50	12 28	15 38	0 11	8 1 15	54	
26	K. Geo. 3. prod.	7 3	4 57	12 48	11 6	1 30	8 52 15	59	
27		7 4	4 56	13 8	6 6	2 48	9 40 16	4	
28	St. Sim. & Jude	7 6	4 54	13 28	0 53	4 3	10 26 16	8	
29		7 8	4 52	13 48	4 a 18	5 16	11 11 16	11	
30	23 Sun. a. Tri.	7 10	4 50	14 8	9 13	6 30	11 56 16	13	
31		7 12	4 48	14 27	13 40	☉ sets	0 a 4 16	14	
M	Day	Length of day	Helioc. long. ♀	Helioc. long. ♀	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ♂	h rises
1	4 59	11 35	25 11 32	10 59	0 45	9 9	14 8 11	11 51	9 a 7
7	5 23	11 10	21 46 11	31 4	34 14	55 23	48 0	14 8	45
13	5 45	10 43	21 59 12	4 8	22 20	52 31	11 27	20 55	8 23
19	6 9	10 24	22 13 12	36 12	11 26	49 13	6 15	7 8	0
25	6 31	10 22	22 26 13	9 15	53 28	49 12	47 14	9 5 7	37

1796.

October.

27

M	Daying.	Daying.	Dur t.	r. l.	l's	h's	l's	l's	l's	l's
D	begins	ends	twilig.	node	latitude	latitude	latitude	latitude	latitude	latitude
1	4 18	7 42	1 59	6 26	4 18	1 24	2 54	2 58	2 26	
7	4 31	7 29	1 53	5 45	1 17	1 24	2 44	1 24	2 59	
13	4 43	7 17	1 57	5 26	1 19	1 23	2 34	0 43	3 14	
19	4 55	7 5	1 57	5 7	1 19	1 22	2 24	0 6	2 58	
25	5 6	6 54	1 58	4 48	1 10	1 21	2 14	0 n 26	1 50	
M	l's	l's	l's	l's	l's	l's	l's	l's	l's	l's
D	longitude	long.	latitude	long.	long.	long.	long.	long.	long.	long.
1	8 59 35	12 37	4 n 58	27 11 47	4 26	14 40	23 32	26	3 44	
7	9 58 45	26 42	4 41	27 47	4 21	15 17	24 21	4 53		
13	10 57 55	9 12 8	4 10	27 48	4 16	15 54	25 13	5 59		
19	11 57 13	21 57	3 28	27 48	4 12	16 31	26 6	7 3		
25	12 56 30	4 9	2 37	27 48	4 7	17 9	27 8	5		
6	13 55 48	16 9	1 40	27 40	4 2	17 46	27 54	9 4		
7	14 55 8	28 0	0 39	27 40	3 58	18 24	28 49	10 1		
8	15 54 30	9 24 7	0 24	27 49	3 54	19 22	29 40	10 55		
8	16 53 54	21 37	1 26	27 40	3 50	19 40	30 40	11 46		
10	17 53 19	3 33	2 24	27 40	3 47	20 18	1 37	12 32		
11	18 52 46	15 43	3 17	27 40	3 43	20 57	2 34	13 13		
12	19 52 15	28 10	4 27	40	3 39	21 35	3 32	13 51		
13	20 51 45	10 25 8	4 56	27 49	3 36	22 14	4 30	14 26		
14	21 51 17	24 9	4 57	27 48	3 33	22 53	5 28	14 55		
15	22 50 52	7 42	5 27	48	3 31	23 32	6 27	15 17		
16	23 50 20	21 37	4 49	27 47	3 26	24 11	7 26	15 32		
17	24 50 7	5 48	4 18	27 47	3 26	24 51	8 26	15 40		
18	25 49 47	20 10	3 31	27 46	3 24	25 30	9 27	15 41		
19	26 49 29	4 11 37	2 30	27 45	3 22	26 10	10 28	15 36		
20	27 49 14	19 3	1 10	27 44	3 20	26 50	11 29	15 22		
21	28 49 1	30 24	0 32	27 43	3 19	27 30	12 31	14 59		
22	29 48 51	17 38	1 n 12	27 41	3 17	28 10	13 33	14 25		
23	30 48 43	1 42	2 23	27 40	3 16	28 51	14 36	13 43		
24	1 48 37	15 36	3 23	27 38	3 15	29 31	15 39	12 53		
25	2 48 33	29 21	4 12	27 36	3 14	30 12	16 42	11 54		
26	3 48 32	12 11 55	4 45	27 34	3 14	0 52	17 45	10 48		
27	4 48 32	26 18	5 27	32	3 14	1 33	18 49	9 36		
28	5 48 36	9 30	5 32	30	3 14	2 14	19 53	8 19		
29	6 48 41	22 29	4 48	27 28	3 14	2 55	20 57	7 2		
30	7 48 48	5 15	4 19	27 26	3 14	3 36	21 5	4 4		
31	8 48 57	17 47	3 38	27 24	3 14	4 17	23 7	4 30		
M	l's	l's	l's	l's	l's	l's	l's	l's	l's	l's
D	sets	sets	rises	sets	declin.	declin.	declin.	declin.	declin.	declin.
1	2 m 59	10 a 8	2 m 3	6 a 15	22 n 9	11 8	12 25	32 11	n 40	15 8 4
7	2 34	10 7	2 9	6 12	22 8	11 22	24 55	10 35	17 40	
13	2 11	10 8	2 16	5 47	22 8	11 29	24 10	9 12	19 16	
19	1 46	10 8	2 26	5 28	22 8	11 33	23 18	7 33	19 22	
25	1 22	10 9	2 38	5 52	22 7	11 35	22 19	5 40	17 9	

The LUNATIONS.

First quarter the 7th day, at 34 minutes past 9 night.

Full Moon the 15th day, at 18 minutes past 3 morning.

Last quarter the 23rd day, at 2 minutes past 7 night.

New Moon the 29th day, at 37 minutes past 10 morning.

M	Sundays & other	☉	☉	☉'s	☉'s	☉ rises	☉	Clock
D	Remark, days	rises	sets	declin.	declin.	& sets	South	aft. ☉
1	All Saints	7 14	4 46	14 s 46	17 s 28	5 a 55	1 a 27	16' 15"
2	Pr. Edward born	All Sou	4 45	15 5	20 29	6 24	2 14	16 15
3	Pr. Sophiab.	7 17	4 43	15 24	22 33	7 0	3 3	16 14
4	K. William 1st	7 19	4 41	15 42	23 37	7 42	3 52	16 13
5	Powder Plot	7 21	4 39	16 1	23 37	8 35	4 41	16 10
6	24 Sun. af. Tri.	Leonar.	4 38	16 18	22 33	9 33	5 30	16 7
7	Mic. Term beg.	7 24	4 36	16 36	20 28	10 40	6 18	16 3
8	Pr. Au. Sop. b.	7 26	4 34	16 53	17 28	11 49	7 5	15 58
9	Lord Mayor's d.	7 27	4 33	17 10	13 37	morn	7 51	15 52
10		7 29	4 31	17 27	9 3	1 0	8 37	15 45
11	St. Martin	7 31	4 29	17 44	3 57	2 15	9 24	15 38
12	Cam. T. div. m.	7 32	4 28	18 0	1 n 31	3 32	10 12	15 29
13	25 Sun. af. Tri.	Britius	4 26	18 16	7 4	4 51	11 2	15 20
14		7 36	4 24	18 31	12 25	6 12	11 56	15 10
15	Machutus	7 37	4 23	18 46	17 9	D rises	morn	15 0
16		7 39	4 21	19 1	20 51	5 a 37	0 53	14 48
17	Hugh Bp. Linc.	7 40	4 20	19 16	23 8	6 27	1 54	14 35
18		7 42	4 18	19 30	23 48	7 27	2 57	14 23
19		7 43	4 17	19 43	22 49	8 39	3 59	14 8
20	26 Sun. a. Tri.	Edmu.	4 16	19 57	20 22	9 55	4 59	13 53
21		7 46	4 14	20 10	16 46	11 15	5 55	13 37
22	Cecilia. O. Mart.	7 47	4 13	20 23	12 20	morn	6 47	13 21
23	St. Clement	7 48	4 12	20 35	7 24	0 33	7 35	13 3
24		7 50	4 10	20 47	2 14	1 48	8 21	12 49
25	Duke of Glouc. b.	Cather.	4 9	20 58	2 s 56	3 1	9 5	12 26
26		7 52	4 8	21 10	7 54	4 13	9 49	12 6
27	Advent Sunday	7 53	4 7	21 20	12 28	5 24	10 33	11 46
28	Mic. Term ends	7 54	4 6	21 31	16 28	6 33	11 18	11 24
29		7 56	4 4	21 41	19 45	D sets	0 a 4	11 3
30	St. Andrew	7 57	4 3	21 50	22 8	4 s 51	0 52	10 40
M	Day	Length	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	H
D	decreas.	of day	long. ♀	long. ♂	long. ♂	long. ♀	long. ♂	rises
1	6 57	9 37	22 11 42	13 47	20 42	9 8 49	4 25 6	24 8 26
7	7 19	9 15	22 55 14	20 24	9 15 51	13 49	2 25 7	6 44
13	7 39	8 55	23 9 14	53 27	55 21	53 23	33 7	5 46
19	7 58	8 36	23 22 15	2 19	39 27	57 30	18 8	10 5
25	8 14	8 29	23 36 18	58 5	22 4	11 13	3 16	5 25

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November.

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M	Daylig.	Daylig.	Durat.	Pl. D's	h's	u's	δ's	♀'s	♂'s
D	begins	ends	twilig.	node	latitude	latitude	latitude	latitude	latitude
1	5 17	6 43	1 59	426	1 s 20	1 s 19	2 s 3	0 n 5	0 n 28
7	5 25	6 35	2 2	4 7	1 s 20	1 18	1 54	1 22	1 56
13	5 34	6 26	2 3	3 48	1 s 20	1 17	1 44	1 41	2 22
19	5 41	6 19	2 5	3 29	1 s 20	1 16	1 35	1 55	2 7
25	5 48	6 12	2 7	3 9	1 s 19	1 14	1 26	2 5	1 32

M	☉'s	D's	D's	h's	u's	δ's	♀'s	♂'s
D	longitude	long.	latitude	long.	long.	long.	long.	long.
1	m 9 49 8	0 f 6	2 n 47	27 11 21	3 15	4 58	24 m 13	3 m 21
2	10 49 21	12 12	1 49 27	19	3 16	5 39 25	19 2	16
3	11 49 36	24 8	0 47 27	16	3 17	6 21 26	25 1	24
4	12 49 52	5 57	0 s 17 27	13	3 18	7 2 27	31 0	45
5	13 40 10	17 43	1 20 27	11	3 20	7 44 28	37 0	15

B	14 50 29	29 31	2 20 27	8	3 21	8 26 29	43 29	56
7	15 50 49	11 26	3 14 27	5	3 23	9 8 0	50 29	D 48
8	16 51 11	23 34	4 1 27	2	3 25	9 50 1	57 29	52
9	17 51 34	5 59	4 37 26	58	3 28	10 32 3	5 cm	7
10	18 51 58	18 46	5 1 26	55	3 30	11 14 4	12 0	32

11	19 52 24	1 59	5 10 26	51	3 33	11 36 5	20 1	5
12	20 52 51	15 38	5 2 26	47	3 36	12 38 6	28 1	46
B	21 53 20	29 43	4 36 26	44	3 39	13 20 7	36 2	36
14	22 53 51	14 8	3 52 26	41	3 43	14 2 8	45 3	33
15	23 54 23	28 54	2 51 26	37	3 46	14 45 0	53 4	34

16	24 54 56	13 46	1 39 26	33	3 50	15 27 11	2 5	39
17	25 55 31	28 39	0 19 26	30	3 54	16 10 12	11 6	49
18	26 56 8	13 25	1 n 1 26	26	3 58	16 52 13	20 8	2
19	27 56 46	27 58	2 17 26	22	4 2	17 35 14	29 9	19
B	28 57 26	12 15	3 22 26	18	4 7	18 17 15	10 10	19

21	29 58 8	26 14	4 14 26	14	4 11	19 0 16	48 12	1
22	1 0 58	52 9	4 50 26	9	4 16	19 43 17	58 13	24
23	1 59 38	23 18	5 10 26	5	4 21	20 26 19	8 14	49
24	3 0 25	6 25	5 13 26	1	4 26	21 9 20	18 16	15
25	4 1 14	19 16	5 0 25	56	4 31	21 52 21	28 17	21

26	5 2 4	1 m 55	4 32 25	52	4 37	22 35 22	38 19	12
B	6 2 56	14 21	3 52 25	47	4 42	23 18 23	49 20	41
28	7 3 49	26 37	3 2 25	43	4 49	24 1 24	59 22	11
29	8 4 43	8 43	2 4 25	38	4 55	24 44 26	10 23	43
30	9 5 39	20 41	1 1 25	34	5 1	25 27 27	21 25	12

M	u's	δ's	♀'s	♂'s	h's	u's	δ's	♀'s	♂'s
D	fets	fets	rises	rises	declin.	declin.	declin.	declin.	declin.
1	om 56	10 a 11	2 m 51	6 m 26	22 n 7	1 s 33	2 s 2	3 n 12	12 s 13
7	0 33	10 11	3 4	5 41	22 6	11 29	19 49	0 56	9 36
13	0 10	10 11	3 17	5 34	22 6	11 22	18 30	1 s 28	10 30
19	11 a 48	10 12	3 30	5 50	22 5	11 13	17 5	3 57	12 37
25	11 25	10 13	3 44	6 15	22 5	11 15	35 6	26 15	40

The LUNATIONS.

First quarter the 7th day, at 58 minutes past 3 afternoon.

Full Moon the 14th day, at 13 minutes past 2 afternoon.

Last quarter the 21st day, at 20 minutes past 6 morning.

New Moon the 29th day, at 59 minutes past 5 morning.

M	Sundays & other	☉	☉	☉'s	☉'s	☉ rises	☉	Clock
D	remark. days	rises	sets	declin.	declin.	& sets	South	aft. ☉
1		7 58	4 2	21 59	23 31	5 31	1 40	10 17
2		7 59	4 1	22 8	23 49	6 20	2 29	9 53
3		8 0	4 0	22 16	23 57	7 16	3 18	9 29
4	2 Sun. in Adve.	8 0	4 0	22 24	24 19	8 19	4 6	9 4
5		8 1	3 50	22 32	24 18	9 26	4 52	8 38
6	Nicholas	8 2	3 56	22 39	25 4	10 35	5 37	8 12
7		8 3	3 57	22 45	25 10	11 40	6 21	7 46
8	Concept. V. M.	8 4	3 56	22 51	6 1	morn	7 6	7 19
9		8 4	3 56	22 57	6 48	0 59	7 51	6 52
10		8 5	3 55	23 2	4 n 37	1 13	8 39	6 24
11	3 Su. in Advent	8 5	3 55	23 7	10 1	2 32	9 29	5 56
12		8 6	3 54	23 11	15 3	3 53	10 24	5 28
13	Lucy	8 6	3 54	23 15	19 18	5 18	11 23	4 59
14	Ember Week	8 7	3 53	23 18	22 20	Drises	morn	4 30
15		8 7	3 53	23 21	23 46	4 57	0 26	4 1
16	Cam. f.e. OSap.	8 7	3 53	23 23	23 27	6 7	1 31	3 32
17	Oxford Ter. e.	8 8	3 52	23 25	21 27	7 23	2 35	3 2
18	4 Sun. in Adve.	8 8	3 52	23 26	18 5	8 45	3 34	2 32
19		8 8	3 52	23 27	13 42	10 9	4 30	2 2
20		8 8	3 52	23 28	8 45	11 24	5 21	1 32
21	St. Thomas	Shor. d.	3 52	23 28	3 31	morn	6 8	1 2
22		8 8	3 52	23 27	1 43	0 40	6 53	0 32
23		8 8	3 52	23 27	6 45	1 53	7 36	0 2
24		8 8	3 52	23 25	11 25	3 1	8 20	cb. 28
25	Christmas Day	8 7	3 53	23 23	15 33	4 12	9 4	0 58
26	St. Stephen	8 7	3 53	23 21	19 0	5 20	9 49	1 28
27	St. John	8 7	3 53	23 18	21 36	6 26	10 36	1 57
28	Innocente	8 6	3 54	23 15	23 15	7 29	11 24	2 27
29		8 6	3 54	23 11	23 51	D sets	0 12	2 56
30		8 5	3 55	23 7	23 23	4 55	1 1	3 25
31	Silvester	8 5	3 55	23 2	21 52	5 56	1 40	3 54
M	Day	Longt	Helioc.	Helioc.	Helioc.	Helioc.	Helioc.	h
D	decreaf.	of day	long. ♀	long. ♂	long. ♂	long. ♀	long. ♀	rises
1	8 28	8 6	23 11	49 16	31 9	10 11	7 22	24 25
7	8 40	7 54	24 3	17 4	12 43	15 13	2 35	13 m 0
13	8 46	7 48	24 16	17 36	16 22	22 19	12 20	0 7 4
19	8 50	7 44	24 30	18 5	19 59	28 25	22 5	16 39
25	o inc. 2	7 46	24 43	18 42	23 34	4 32	1 48	3 3

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December.

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M	Day lig.	Day lig.	Durat.	Pl. D's	h's	4's	δ's	♀'s	♂'s
D	begins	ends	twilg.	node	latitude	latitude	latitude	latitude	latitude
1	5 54	6 6	2 8	25 30	1 s 19	1 s 13	1 s 18	2 n 11	0 n 50
7	5 57	6 3	2 10	2 31	1 19	1 12	1 9	2 13	0 7
13	5 59	6 1	2 12	2 12	1 18	1 11	1 1	2 11	0 s 34
19	6 1	5 59	2 11	1 53	1 18	1 10	0 53	2 6	1 10
25	6 1	5 59	2 11	1 34	1 17	1 9	0 46	1 58	1 39

M	☉'s	☽'s	☽'s	h's	4's	δ's	♀'s	♂'s
D	longitude	long.	latitude	long.	long.	long.	long.	long.
1	10 6 36	25 32	0 s 4	25 12 29	5 7	10 10	28 31	26 11 44
2	11 7 33	14 20	1 9	25 25	5 14	26 53	29 43	18 16
3	12 8 31	26 6	2 11	25 20	5 21	27 36	em 56	29 48
4	13 9 30	7 55	3 7	25 15	5 28	28 20	2 7	1 20
5	14 10 30	19 50	3 56	25 10	5 35	29 3	3 18	2 52
6	15 11 31	1 56	4 35	25 5	5 42	29 46	4 29	4 24
7	16 12 32	14 18	5 3	25 0	5 49	30 3	5 41	5 57
8	17 13 33	27 0	5 16	24 56	5 57	1 13	6 53	7 3
9	18 14 35	10 7	5 14	24 51	6 5	1 56	8 5	9 3
10	19 15 38	23 39	4 55	24 46	6 13	2 40	9 17	10 36
11	20 16 41	7 39	4 17	24 41	6 22	3 23	10 29	12 9
12	21 17 44	22 7	3 23	24 36	6 30	4 6	11 41	13 42
13	22 18 48	6 11	2 14	24 31	6 37	4 50	12 53	15 15
14	23 19 53	22 1	0 54	24 26	6 45	5 33	14 5	16 48
15	24 20 58	7 13	0 n 30	24 21	6 54	6 16	15 18	18 22
16	25 22 4	22 21	1 52	24 16	7 2	7 0	16 30	19 56
17	26 23 11	7 17	3 5	24 11	7 11	7 43	17 43	21 30
18	27 24 18	21 54	4 5	24 6	7 20	8 26	18 55	23 4
19	28 25 26	6 12	4 47	24 1	7 29	9 10	20 8	24 39
20	29 26 35	19 58	5 12	23 56	7 38	9 53	21 20	26 13
21	30 27 44	3 22	5 18	23 51	7 48	10 37	22 33	27 48
22	1 28 54	16 24	5 8	23 46	7 57	11 21	23 46	29 23
23	2 30 5	29 6	4 43	23 41	8 7	12 4	24 59	31 58
24	3 31 16	11 31	4 5	23 36	8 17	12 48	26 12	2 33
25	4 32 28	22 22	3 17	23 31	8 27	13 32	27 25	4 9
26	5 33 40	5 46	2 20	23 26	8 37	14 15	28 38	5 45
27	6 34 53	17 41	1 13	23 21	8 48	14 59	29 51	7 22
28	7 36 6	29 31	0 13	23 16	8 58	15 42	1 4	8 59
29	8 37 19	11 19	0 s 53	23 12	9 9	16 26	2 18	10 37
30	9 38 32	23 7	1 56	23 7	9 19	17 9	3 31	12 18
31	10 39 45	4 57	2 54	23 2	9 29	17 53	4 44	13 51
M	☽'s	♂'s	♀'s	♂'s	h's	4's	δ's	♀'s
D	sets	sets	rises	rises	declin.	declin.	declin.	declin.
1	11 3 10	2 12	3 m 58	6 m 42	22 n 4	10 s 47	14 s 1	8 s 56
7	10 4 10	12	4 12	7 10	22 4	10 30	12 23	11 20
13	10 19 10	11	4 25	7 38	22 3	10 12	10 42	13 38
19	9 57 10	9	4 39	8 22	22 2	9 51	8 58	15 46
25	9 36 10	7	4 54	8 21	22 2	9 29	7 11	17 41
31								

Dates		Heliocentric		Geocentric		Declin.	South.	
Months	Days	longitude	latitude	longitude	latitude		h	m
January	1	0 5 23	0 n 46	7 59	0 n 47	9 n 19	15	49
	11	5 31	0 46	7 46	0 48	9 24	15	5
	21	5 38	0 46	7 28	0 48	9 31	14	21
February	1	5 47	0 46	7 5	0 48	9 40	13	34
	11	5 55	0 46	6 40	0 48	9 49	12	53
	21	6 3	0 46	6 14	0 48	9 59	12	13
March	1	6 10	0 46	5 51	0 49	10 8	11	38
	11	6 17	0 46	5 25	0 48	10 17	10	59
	21	6 25	0 46	5 1	0 48	10 26	10	21
April	1	6 34	0 46	4 38	0 48	10 34	9	40
	11	6 42	0 46	4 21	0 48	10 40	9	2
	21	6 49	0 46	4 8	0 47	10 44	8	24
May	1	6 57	0 46	4 1	0 47	10 47	7	46
	11	7 5	0 46	3 D 59	0 47	10 47	7	7
	21	7 13	0 46	4 2	0 46	10 45	6	28
June	1	7 21	0 46	4 11	0 46	10 41	5	44
	11	7 29	0 46	4 25	0 45	10 36	5	4
	21	7 37	0 46	4 42	0 45	10 29	4	24
July	1	7 45	0 46	5 8	0 45	10 20	3	44
	11	7 53	0 46	5 35	0 44	10 10	3	5
	21	8 1	0 46	6 6	0 44	9 58	2	27
August	1	8 9	0 46	6 42	0 44	9 44	1	45
	11	8 17	0 46	7 18	0 44	9 31	1	10
	21	8 25	0 46	7 55	0 44	9 17	0	35
September	1	8 33	0 46	8 37	0 44	9 1	23	54
	11	8 41	0 46	9 15	0 44	8 47	23	20
	21	8 49	0 46	9 52	0 44	8 33	22	47
October	1	8 57	0 46	10 27	0 44	8 20	22	13
	11	9 5	0 46	11 0	0 44	8 8	21	38
	21	0 12	0 46	11 31	0 44	7 56	21	3
November	1	9 21	0 46	12 0	0 45	7 45	20	22
	11	9 29	0 46	12 21	0 45	7 38	19	43
	21	9 37	0 46	12 39	0 46	7 32	19	3
December	1	9 44	0 46	12 50	0 46	7 27	18	21
	11	9 52	0 46	12 5	0 47	7 25	17	38
	21	10 0	0 46	12 R 57	0 47	7 25	16	54
	31	10 8	0 46	12 52	0 47	7 28	16	9

Time of High-Water at LONDON in the morning and afternoon of every day in the year.

Mo. Day	JANUARY				FEBRUARY				MARCH				APRIL				Mo. Day
	morn.		aftern.		morn.		aftern.		morn.		aftern.		morn.		aftern.		
	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	
1	6	40	7	2	7	15	7	42	6	38	7	3	8	4	8	36	1
2	7	25	7	50	8	10	8	37	7	29	7	59	9	9	9	43	2
3	8	16	8	43	9	10	9	40	8	30	8	2	10	18	10	50	3
4	9	12	9	40	10	12	10	45	9	36	10	9	11	22	11	54	4
5	10	8	10	36	11	16	11	48	10	27	11	16			0	22	5
6	11	5	11	34			0	18	11	23			0	50	1	16	6
7			0	3	0	46	1	13	0	18	0	46	1	42	2	7	7
8	0	30	0	56	1	46	2	5	1	13	1	39	2	31	2	52	8
9	1	21	1	46	2	29	2	51	2	5	2	30	3	12	3	29	9
10	2	11	2	36	3	8	3	24	2	50	3	7	3	47	4	3	10
11	2	56	3	12	3	39	3	54	3	24	3	40	4	25	4	47	11
12	3	28	3	44	4	11	4	18	3	56	4	10	5	11	5	35	12
13	4	9	4	15	4	47	5	6	4	30	4	52	6	3	6	34	13
14	4	33	4	52	5	20	5	47	5	14	5	37	7	6	7	39	14
15	5	14	5	38	6	14	6	42	6	4	6	34	8	14	8	52	15
16	5	56	6	14	7	11	7	42	7	5	7	38	9	28	10	4	16
17	6	39	7	7	8	17	8	55	8	14	8	53	10	36	11	7	17
18	7	36	8	6	9	34	10	15	9	31	10	11	11	37			18
19	8	40	9	17	10	54	11	32	10	48	11	23	0	6	0	32	19
20	9	55	10	33			0	7	11	55			0	56	1	19	20
21	11	12	11	50	0	40	1	10	0	26	0	54	1	41	2	42	21
22			0	14	1	38	2	6	1	20	1	45	2	25	2	43	22
23	0	58	1	30	2	32	2	52	2	8	2	30	2	59	3	15	23
24	2	1	2	28	3	8	3	24	2	49	3	5	3	29	3	44	24
25	2	53	3	11	3	19	3	53	3	19	3	34	3	58	4	14	25
26	3	30	3	46	4	6	4	23	3	47	4	2	4	32	4	49	26
27	4	2	4	19	4	40	4	57	4	16	4	31	5	8	5	29	27
28	4	36	4	53	5	14	5	32	4	51	5	8	5	51	6	16	28
29	5	10	5	28	5	52	6	14	5	26	5	48	6	41	7	9	29
30	5	48	6	8					6	12	6	37	7	37	8	7	30
31	6	31	6	54					7	5	7	33					31

This Table may serve the following Places, by adding

For Tinnmouth Haven, Hartle-pool, and Amsterdam 0 30
 Brest — — — — — 1 0
 Scilly — — — — — 1 45
 Mount's Bay — — — — — 1 55
 Bejlington Pier and Humber — — — — — 2 0

Time of High-Water at LONDON in the morning and afternoon of every day in the year.

M. Days	MAY				JUNE				JULY				AUGUST				No. Days
	morn.		aftern.		morn.		aftern.		morn.		aftern.		morn.		aftern.		
	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	
1	8	38	9	10	10	5	10	36	10	26	11	1			0	34	1
2	9	44	10	16	11	8	11	40	11	39			1	8	1	40	2
3	10	47	11	19			0	12	0	14	0	48	2	10	2	39	3
4	11	51			0	43	1	14	1	21	1	54	3	0	3	19	4
5	0	21	0	47	1	45	2	16	2	24	2	53	3	37	3	53	5
6	1	14	1	41	2	42	3	6	3	14	3	34	4	10	4	26	6
7	2	3	2	36	3	28	3	48	3	52	4	10	4	44	5	3	7
8	2	58	3	18	4	9	4	30	4	31	4	52	5	21	5	39	8
9	3	38	3	57	4	52	5	15	5	12	5	31	6	1	6	23	9
10	4	20	4	42	5	19	6	4	5	53	6	16	6	47	7	11	10
11	5	7	5	30	6	30	6	56	6	39	7	3	7	37	8	4	11
12	5	59	6	28	7	23	7	50	7	28	7	53	8	34	9	5	12
13	6	57	7	27	8	18	8	46	8	20	8	48	9	37	10	9	13
14	7	59	8	32	9	15	9	45	9	18	9	48	10	41	11	12	14
15	9	4	9	35	10	13	10	39	10	18	10	47	11	43			15
16	10	3	10	34	11	6	11	33	11	17	11	40	0	14	0	43	16
17	11	2	11	30	11	59				0	15		1	8	1	34	17
18	11	56			0	27	0	52	0	42	1	8	2	0	2	22	18
19	0	20	0	45	1	16	1	41	1	33	1	59	2	44	3	1	19
20	1	7	1	30	2	4	2	26	2	24	2	44	3	17	3	32	20
21	1	52	2	14	2	48	3	6	3	2	3	20	3	47	4	2	21
22	2	36	2	51	3	22	3	38	3	34	3	50	4	16	4	33	22
23	3	16	3	30	3	51	4	9	4	3	4	20	4	53	5	12	23
24	3	41	3	57	4	26	4	47	4	37	4	54	5	32	5	5	24
25	4	11	4	29	5	3	5	21	5	12	5	32	6	23	6	5	25
26	4	49	5	8	5	40	6	3	5	52	6	17	7	21	7	5	26
27	5	27	5	50	6	26	6	50	6	42	7	9	8	34	9	14	27
28	6	13	6	38	7	15	7	42	7	37	8	10	9	56	10	35	28
29	7	4	7	32	8	12	8	44	8	44	9	21	11	13	11	50	29
30	8	0	8	30	9	18	9	51	10	1	10	40			0	26	30
31	9	0	9	32					11	19	11	57	0	58	1	28	31

Adding

h m

For Fowey, Loo and Plymouth	—	—	—	—	3	10
Dartmouth, Harbrough and Hull	—	—	—	—	3	30
Torbay and Tinnmouth	—	—	—	—	3	40
Exmouth, Topsham and Lime	—	—	—	—	3	50
Weymouth	—	—	—	—	4	20
Bridgewater and Texel	—	—	—	—	4	40
Portland and Hartlew	—	—	—	—	5	50

1796.

Tide Tables.

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Time of High-Water at LONDON in the morning and afternoon of every day in the year.

Mo. Days	SEPTEMBER				OCTOBER				NOVEMBER				DECEMBER				Mo. Days
	morn.		aftern.		morn.		aftern.		morn.		aftern.		morn.		aftern.		
	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	
1	1	5	2	24	2	25	2	46	3	14	3	28	3	21	3	36	1
2	2	45	3	4	3	2	3	18	3	44	3	57	3	51	4	6	2
3	3	26	3	34	3	31	3	48	4	14	4	32	4	24	4	44	3
4	3	49	4	4	4	2	4	16	4	50	5	10	5	2	5	21	4
5	4	21	4	19	4	31	4	53	5	31	5	52	5	41	6	3	5
6	4	56	5	13	5	12	5	31	6	17	6	43	6	26	6	50	6
7	5	32	5	53	5	5	6	17	7	9	7	35	7	14	7	39	7
8	6	17	6	42	6	43	7	10	8	5	8	35	8	7	8	36	8
9	7	7	7	34	7	39	8	9	9	5	9	36	9	6	9	36	9
10	8	4	8	35	8	41	9	15	10	6	10	37	10	7	10	39	10
11	9	8	9	42	9	47	10	18	11	7	11	37	11	12	11	44	11
12	10	15	10	47	10	49	11	20			0	5			0	15	12
13	11	10	11	51	11	50			0	33	1	0	0	46	1	17	13
14			0	10	0	19	0	45	1	26	1	50	1	47	2	17	14
15	0	46	1	11	1	9	1	34	2	21	2	44	2	47	3	10	15
16	1	36	2	1	1	59	2	23	3	6	3	26	3	31	3	51	16
17	2	25	2	44	2	45	3	4	3	45	4	8	4	10	4	33	17
18	3	2	3	18	3	22	3	39	4	28	4	51	4	56	5	19	18
19	3	33	3	49	3	56	4	16	5	15	5	42	5	42	6	7	19
20	4	4	4	23	4	37	5	0	6	10	6	39	6	31	6	58	20
21	4	43	5	3	5	23	5	52	7	10	7	41	7	23	7	51	21
22	5	24	5	50	6	21	6	52	8	12	8	43	8	19	8	47	22
23	6	19	6	50	7	25	8	0	9	15	9	46	9	16	9	45	23
24	7	23	7	56	8	38	9	14	10	16	10	45	10	15	10	43	24
25	8	39	9	18	9	50	10	24	11	12	11	40	11	11	11	39	25
26	9	59	10	36	10	56	11	27			0	8			0	8	26
27	11	12	11	46	11	57			0	33	0	56	0	34	0	59	27
28			0	19	0	24	0	48	1	19	1	42	1	24	1	48	28
29	0	47	1	14	1	12	1	35	2	6	2	29	2	12	2	36	29
30	1	40	2	4	1	58	2	21	2	48	3	5	2	54	3	11	30
31					2	40	2	58					3	27	3	43	31

Subtracting

h m

For Leigh, Maes, and Gouries Gut	—	—	—	—	0	5
Gravesend, Rochester, and Rammekins	—	—	—	—	1	20
Buoy of the Nore and Flushing	—	—	—	—	1	30
Portsmouth, Ostend, Shoe-Bacon, and Red-Sand	—	—	—	—	2	0
Harwich, Dover, Spithead, and Calais	—	—	—	—	3	0
Gunfleet, Hastings, Shoreham, Orfordness, and Dieppe	—	—	—	—	4	0
Yarmouth Pier and Needle	—	—	—	—	4	40
St. Helen's and Havre-de-Grace	—	—	—	—	5	10

The Eclipses of Jupiter's

JANUARY	FEBRUARY	MARCH	APRIL
The Satellites of Jupiter will not be visible this Month, Jupiter being too near the Sun.	The Satellites of Jupiter will not be visible this Month, Jupiter being too near the Sun.	Immersion	Immersion
		d h m s	d h m s
		11 11 33 59	1 17 22 14
		13 6 3 0	3 11 51 12
		15 0 32 0	5 6 20 10
		16 19 1 3	7 0 49 7
		18 13 30 5	8 19 18 4
		20 7 59 7	10 13 47 0
		22 2 28 9	12 8 15 54
		23 20 57 12	14 2 44 45
		25 15 26 14	15 21 13 35
		27 9 55 15	17 15 42 24
		29 4 24 17	19 10 11 13
		30 22 53 17	21 4 39 59
			22 23 8 45
			24 17 37 29
			26 12 6 11
			28 6 34 51
			30 1 3 31
MAY	JUNE	JULY	AUGUST
Immersion	Immersion	Immersion	Immersion
1 19 32 4	2 16 1 46	2 17 58 37	1 20 0 48
3 14 0 40	4 10 29 51	4* 12 26 43	3* 14 29 31
5 8 29 9	6 4 57 51	6 6 54 52	5 8 58 15
7 2 57 44	7 23 25 56	8 1 23 2	7 3 27 1
8 21 26 10	9 17 53 56	9 19 51 17	8 21 55 51
10 15 54 33	11 12 22 2	11* 14 19 28	10 16 24 40
12 10 22 59	13 6 49 59	13 8 47 39	12* 10 53 33
14 4 51 22	15 1 18 4	15 3 15 58	14 5 22 30
15 23 19 42	16 19 46 4	16 21 44 16	15 23 51 26
17 17 48 1	18* 14 14 6	18 16 12 37	17 18 20 30
19 12 16 22	20 8 42 6	20* 10 40 59	19* 12 49 31
21 6 44 35	22 3 10 12	22 5 9 28	21 7 18 38
23 1 12 51	23 21 38 10	23 23 37 53	23 1 47 41
24 19 41 4	25 16 6 14	25 18 6 25	24 20 16 52
26 14 9 13	27 10 34 19	27* 12 34 54	26* 14 46 1
28 8 37 23	29 5 2 27	29 7 3 33	28* 9 15 12
30 3 5 33	30 23 30 28	31 1 32 6	30 3 44 25
31 21 53 37			

1796.

Jupiter's Satellites.

37

first Satellite for the Year 1796.

SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Emerfions	Emerfions	Emerfions	Emerfions
d h m s	d h m s	d h m s	d h m s
1 0 27 55	1 2 47 8	1 23 23 14	2 1 39 34
2 18 57 10	2 21 16 33	3 18 2 10	3 20 7 50
4* 13 26 25	4 15 49 55	5 12 31 4	5 14 36 6
6* 7 55 44	6 10 14 18	7* 6 59 55	7* 9 4 19
8 2 25 4	8 4 44 40	9 1 28 44	9 3 32 31
9 20 54 25	9 23 14 2	10 19 57 30	10 22 0 42
11 15 23 45	11 17 43 21	12 14 26 14	12 16 28 52
13* 19 53 8	13* 12 12 42	14* 8 54 55	14 10 56 59
15 4 22 31	15* 6 41 59	16 3 23 34	16* 5 25 7
16 22 51 54	17 1 11 17	17 21 32 11	17 23 53 14
18 17 21 18	18 19 40 30	19 16 20 45	19 18 21 22
20* 11 50 43	20 14 9 44	21 10 49 16	21 12 49 29
22 6 20 8	22* 8 38 53	23* 5 17 45	23* 7 17 35
24 0 49 33	24 3 8 2	24 23 46 10	25 1 45 40
25 19 18 58	25 21 37 8	26 28 14 33	26 20 13 46
27* 13 48 23	27 16 6 13	28* 12 42 56	28 14 41 53
29* 8 17 46	29* 10 35 14	30 7 11 16	30 9 10 0
	31 5 4 15		

The Times of the Eclipses contained in this Table are adapted to the Meridian of the Royal Observatory at Greenwich, and afford an excellent Method to discover the Longitude, or Difference of Meridians, between that and any other Place; which I shall illustrate by an EXAMPLE:

Suppose on the 25th Day of September of this Year, the Time of the Emerfion of Jupiter's first Satellite be observed (by a Telescope) in an unknown Meridian; to happen at 21 h. 7 min. 18 sec.; I find by the Table, that the Time of this Emerfion will happen at the British Observatory, at 19 h. 18 min. 58 sec. the same day: The Difference of the Times is 1 hour 48 min. 20 sec. which being converted into Degrees and Minutes of the Equator, will make 27 deg. 5 min. the Longitude of the Place of Observation, to the East, because the Time is more than that at the British Observatory.

N. B. Those marked with an Asterisk are visible at Greenwich.

Speculum Phænomenorum

JANUARY	FEBRUARY	MARCH
3 δ $\llcorner$ δ 14h. 5 δ in aphelion 9 δ $\llcorner$ δ 10h. 9 δ in apoge 9 $\odot$ eclips. invisible 11 δ $\llcorner$ δ 15h. 11 δ $\llcorner$ δ 15h. 15 δ $\odot$ δ 15h. 19 $\odot$ in π 17h. 38m. 20 δ $\llcorner$ δ oh. 22 δ in δ 23 $\llcorner$ in perige	1 δ $\llcorner$ δ 7h. 5 $\llcorner$ in apoge 6 δ stationary 7 δ $\llcorner$ δ 24 10h. 8 δ $\odot$ δ 7h. 9 δ $\llcorner$ δ 21h. 10 δ $\llcorner$ δ 18h. 13 δ elong. max. 16 δ $\llcorner$ δ 6h. 18 $\odot$ in π 8h 23m. 19 $\llcorner$ in perige 21 δ stationary 22 $\odot$ δ 15h. 24 $\odot$ δ 9h. 25 $\odot$ δ 9h. 29 δ $\odot$ δ 19h.	1 δ $\llcorner$ δ oh. 4 $\llcorner$ in ap. ge 7 δ $\llcorner$ δ 24 7h. 8 δ $\llcorner$ δ oh. 11 δ $\llcorner$ δ 17h. 14 δ $\llcorner$ δ 13h. 14 δ stationary 17 $\llcorner$ in perige 19 $\odot$ in π 8h. 42m. 28 δ elong. max. 29 δ $\llcorner$ δ 9h. 31 $\llcorner$ in apoge
APRIL	MAY	JUNE
4 δ $\llcorner$ δ 4h. 5 δ $\llcorner$ δ 12h. 10 δ $\llcorner$ δ 10h. 11 δ $\llcorner$ δ oh. 13 $\llcorner$ in perige 18 $\odot$ in δ 21h. 21m. 21 δ in δ 26 δ $\llcorner$ δ 8h. 27 $\llcorner$ in apoge	1 δ $\llcorner$ δ 23h. 6 δ $\llcorner$ δ 18h. 6 δ in δ 8 δ $\odot$ δ 2h. 8 δ $\llcorner$ δ 14h. 10 δ $\llcorner$ δ 1h. 10 $\llcorner$ in perige 12 δ stationary 19 $\odot$ in π 21h. 54m. 20 δ in perihelion 23 δ $\llcorner$ δ 17h. 24 $\odot$ δ 4h. 24 $\llcorner$ in apoge 27 δ elong. max. 29 δ $\llcorner$ δ 14h.	1 $\odot$ δ 3h. 5 δ $\llcorner$ δ 6h. 6 δ $\odot$ δ 20h. 6 δ $\llcorner$ δ 21h. 6 $\llcorner$ in perige 8 δ $\llcorner$ δ 9h. 10 δ elong. max. 14 δ $\odot$ δ 14h. 19 δ $\llcorner$ δ 11h. 20 $\odot$ in π 6h. 36m. 20 $\llcorner$ in apoge 20 δ in perihelion 23 δ stationary 26 δ $\llcorner$ δ oh.

ad Annum 1796.

JULY		AUGUST		SEPTEMBER	
1	♂ stationary	1	♂ ☾ 11h.	2	♂ ☾ 8h.
2	♂ ☾ 22h.	3	♂ ☾ ♀ 0h.	10	♂ ☾ ♀ 2h.
4	♂ ☾ 15h.	5	♂ ☉ ♀ 4h.	10	☾ in apoge
4	☉ ecl. invisible	12	♂ ☾ ♂ 18h.	15	♂ ☾ 24 6h.
4	☾ in perige	14	☾ in apoge	19	☐ ☉ 7h.
6	♂ ☉ 3h.	19	♂ ☾ 24 4h.	21	☉ in ♄ 2ch. 29m.
7	♂ ☾ ♀ 0h.	21	♂ ☉ 3h.	23	♂ ☾ 9h.
16	♂ ☾ 3h.	21	☉ in ♃ 23h. 56m.	24	☾ in perige
16	♂ stationary	27	♂ ☾ 0h.	27	♂ ☾ ♀ 2h.
7	♂ stationary	27	♀ stationary		
18	☾ in apoge	27	☾ in perige		
20	♂ stationary	29	♂ ☾ ♀ 18h.		
21	☉ in ♌ 17h. 30m.	30	♂ ☉ 24 10h.		
23	♂ ☾ 24 4h.	30	♂ ☉ 20h.		
29	♂ elong. max.				
30	♂ ☾ 13h.				
31	☾ in perige				
OCTOBER		NOVEMBER		DECEMBER	
2	♂ ☾ 16h.	3	☾ in apoge	2	☾ in apoge
5	♂ elong. max.	6	♂ ☾ ♂ 19h.	3	☐ ☉ 17h.
7	☾ in apoge	7	♂ stationary	5	♂ ☾ ♂ 18h.
8	♂ ☾ ♂ 20h.	8	♂ ☾ 24 19h.	6	♂ ☾ 24 7h.
10	♂ stationary	14	♂ elong. max.	7	♂ in perihelion
10	♂ in perihelion	16	♂ ☾ 21h.	12	♂ in aphelion
12	♂ ☾ 24 10h.	17	☾ in perige	14	♂ ☾ 4h.
13	♂ in ☿	21	☉ in ♀ 0h. 44m.	14	☾ eclip. invisible
16	♀ elong. max.	24	♂ in ☿	14	☾ in perige
17	☐ ☉ ♂ 1h.	25	♂ ☾ ♀ 5h.	15	♂ ☉ 0h.
18	♂ stationary	25	☐ ☉ 24 13h.	2	☉ in ♃ 13h. 7m.
20	♂ ☾ 13h.	27	♂ ☾ 10h.	25	♂ ☾ ♀ 8h.
21	☾ in perige			25	♂ ☉ 16h.
23	☉ in ♌ 4h. 28m.			28	♂ ☾ 22h.
22	♂ in ☿			28	☉ eclip. invisible
26	♂ ☾ ♀ 10h.			28	☾ in apoge
29	♂ ☉ 2h.				
30	♂ ☾ 1h.				
30	24 stationary				

A Table of the Sun's semi-diurnal Arches, or Times

The Sun's Declination North.

Degr.	Lat. 49		Lat. 50		Lat. 51		Lat. 52		Lat. 53		Lat. 54	
	h	m	h	m	h	m	h	m	h	m	h	m
0	6	4	6	4	6	4	6	4	6	4	6	4
1	6	8	6	8	6	8	6	9	6	9	6	9
2	6	12	6	13	6	13	6	14	6	14	6	15
3	6	17	6	18	6	18	6	19	6	19	6	20
4	6	22	6	22	6	22	6	24	6	25	6	25
5	6	26	6	27	6	27	6	29	6	30	6	31
6	6	31	6	32	6	33	6	34	6	36	6	37
7	6	36	6	37	6	38	6	40	6	41	6	43
8	6	41	6	42	6	43	6	45	6	47	6	48
9	6	45	6	47	6	48	6	50	6	52	6	54
10	6	50	6	52	6	54	6	56	6	58	7	0
11	6	55	6	57	6	59	7	1	7	3	7	6
12	7	0	7	2	7	4	7	7	7	9	7	12
13	7	5	7	7	7	10	7	12	7	15	7	18
14	7	10	7	13	7	15	7	18	7	21	7	24
15	7	15	7	18	7	21	7	24	7	27	7	31
16	7	21	7	24	7	27	7	30	7	33	7	37
17	7	26	7	29	7	33	7	36	7	40	7	44
18	7	31	7	35	7	38	7	42	7	46	7	51
19	7	37	7	41	7	45	7	49	7	53	7	58
20	7	43	7	47	7	51	7	55	8	0	8	5
21	7	49	7	53	7	57	8	2	8	7	8	12
22	7	55	7	59	8	4	8	9	8	14	8	20
23	8	1	8	6	8	11	8	16	8	22	8	28
24	8	7	8	12	8	18	8	24	8	30	8	36

By these Tables the Times of the Sun's Rising and Setting may be found, in any Part of the Kingdom of *Great-Britain* or *Ireland*, after the following Manner: Where the Latitude of the Place is known, take the Sun's Declination out of the Table, on the Noon of the Day you desire to know the Time of his Rising and Setting; and with it, according as it is either North or South, enter these Tables in the Left-

of his visible half Duration above the Horizon.

The Sun's Declination South.

Degr.	Lat. 49		Lat. 50		Lat. 51		Lat. 52		Lat. 53		Lat. 54	
	h	m	h	m	h	m	h	m	h	m	h	m
0	6	4	6	4	6	4	6	4	6	4	6	4
1	5	59	5	59	5	58	5	58	5	58	5	58
2	5	54	5	54	5	53	5	53	5	53	5	53
3	5	49	5	49	5	49	5	48	5	48	5	47
4	5	45	5	44	5	44	5	43	5	42	5	42
5	5	40	5	39	5	39	5	38	5	37	5	36
6	5	35	5	35	5	34	5	33	5	31	5	30
7	5	31	5	30	5	29	5	27	5	26	5	25
8	5	26	5	25	5	23	5	22	5	21	5	19
9	5	21	5	20	5	18	5	17	5	16	5	13
10	5	17	5	15	5	13	5	11	5	10	5	8
11	5	12	5	10	5	8	5	6	5	4	5	2
12	5	7	5	5	5	3	5	0	4	58	4	56
13	5	2	5	0	4	57	4	55	4	52	4	50
14	4	57	4	54	4	52	4	49	4	47	4	44
15	4	52	4	49	4	46	4	44	4	41	4	37
16	4	46	4	42	4	41	4	38	4	34	4	31
17	4	41	4	38	4	35	4	32	4	28	4	23
18	4	36	4	33	4	29	4	26	4	22	4	18
19	4	30	4	27	4	23	4	19	4	15	4	11
20	4	25	4	21	4	17	4	13	4	9	4	4
21	4	19	4	15	4	11	4	6	4	2	3	57
22	4	13	4	9	4	4	4	0	3	55	3	50
23	4	7	4	3	3	58	3	53	3	47	3	42
24	4	1	3	56	3	51	3	46	3	40	3	34

Left-hand Column, under the Word Degrees; then look for the Latitude of the Place in the Top of the Table; and in that Column, against the Sun's Declination, will be found the Time of his visible half Duration above the Horizon, or Time of his Setting, correct by Refraction; then subtract the Time of his Setting from 12 Hours, the Remainder will be the Time of his Rising; double the Time of his Setting, the

A Table of the Sun's semi-diurnal Arches, or Times

The Sun's Declination North.

Decl.	Lat. 55		Lat. 56		Lat. 57		Lat. 58		Lat. 59		Lat. 60	
	h	m	h	m	h	m	h	m	h	m	h	m
0	6	4	6	4	6	4	6	4	6	4	6	4
1	6	9	6	10	6	10	6	10	6	11	6	11
2	6	15	6	16	6	16	6	17	6	17	6	18
3	6	21	6	22	6	22	6	23	6	24	6	25
4	6	27	6	28	6	29	6	30	6	31	6	32
5	6	32	6	34	6	35	6	36	6	38	6	39
6	6	38	6	40	6	41	6	43	6	44	6	46
7	6	44	6	46	6	48	6	49	6	51	6	53
8	6	50	6	52	6	54	6	56	6	58	7	1
9	6	56	6	58	7	1	7	3	7	5	7	8
10	7	2	7	5	7	7	7	10	7	13	7	16
11	7	8	7	10	7	14	7	17	7	20	7	23
12	7	15	7	18	7	21	7	24	7	27	7	31
13	7	21	7	24	7	28	7	31	7	35	7	39
14	7	28	7	31	7	35	7	39	7	43	7	47
15	7	34	7	39	7	42	7	46	7	51	7	56
16	7	41	7	45	7	49	7	54	7	59	8	4
17	7	48	7	52	7	57	8	1	8	7	8	13
18	7	55	8	0	8	5	8	10	8	16	8	22
19	8	2	8	7	8	13	8	19	8	25	8	32
20	8	10	8	15	8	21	8	28	8	35	8	42
21	8	18	8	24	8	30	8	37	8	45	8	53
22	8	26	8	32	8	39	8	47	8	55	9	4
23	8	34	8	41	8	49	8	57	9	6	9	16
24	8	43	8	51	8	59	9	8	9	18	9	29

the Sum will be the Length of the Day ; and double the Time of his Rising, the Sum will be the Length of the Night. But if the Latitude of the Place, and Declination of the Sun, consist of Degrees and Minutes, then a small Allowance must be made for the Minutes in both Cases, which may be done by a Person of an ordinary Capacity by a mental Proportion only. Thus, to find the Time of the Sun's Rising and Setting at

of his visible half Duration above the Horizon.

The Sun's Declination South.

Degr.	Lat. 55		Lat. 56		Lat. 57		Lat. 58		Lat. 59		Lat. 60	
	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.
0	6	4	6	4	6	4	6	4	6	4	6	4
1	5	58	5	58	5	58	5	58	5	57	5	57
2	5	52	5	52	5	52	5	51	5	51	5	50
3	5	47	5	46	5	45	5	45	5	44	5	43
4	5	41	5	40	5	39	5	38	5	37	5	36
5	5	35	5	34	5	33	5	32	5	31	5	29
6	5	29	5	28	5	27	5	25	5	24	5	22
7	5	23	5	22	5	20	5	19	5	17	5	15
8	5	17	5	16	5	14	5	12	5	10	5	8
9	5	12	5	10	5	8	5	5	5	3	5	2
10	5	5	5	3	5	1	4	59	4	56	4	53
11	4	59	4	57	4	54	4	52	4	49	4	46
12	4	53	4	51	4	48	4	45	4	42	4	38
13	4	47	4	44	4	41	4	38	4	34	4	30
14	4	41	4	37	4	34	4	30	4	27	4	23
15	4	34	4	31	4	27	4	23	4	19	4	14
16	4	27	4	24	4	20	4	15	4	11	4	6
17	4	21	4	17	4	12	4	8	4	3	3	57
18	4	14	4	9	4	5	4	0	3	54	3	48
19	4	7	4	2	3	56	3	51	3	45	3	39
20	3	59	3	54	3	49	3	43	3	36	3	29
21	3	52	3	46	3	40	3	34	3	27	3	19
22	3	44	3	38	3	31	3	24	3	17	3	9
23	3	36	3	29	3	23	3	15	3	9	2	57
24	3	27	3	20	3	13	3	5	2	55	2	45

at Aberdeen in Scotland, on the Longest Day; the Latitude of that Place is accounted 57 Degr. 7 Min. North, and the Sun's Declination 23 Deg. 28 Min. likewise North. By these you will find by the Table, that 5 Min. for the Sun's Declination, and 1 Min. for the Latitude of the Place, are both, to be added to 8 Hours 49 Min. the Time belonging to 57 Degr. of Latitude and 23 Degr. of North Declination, and the Sum will be 8 Hours 55 Min. the Time of his apparent Setting at Aberdeen, on the longest Day, whose Complement to 12 Hours, viz. 3 Hours 5 Min. will be the Time of his Rising, &c.

A Table of the Sun's Right-Ascension in Time, the greatest

Decl.	V			8			11			20			29			38		
	h	m	s	h	m	s	h	m	s	h	m	s	h	m	s	h	m	s
0	0	0	0	1	51	37	3	51	15	6	0	0	8	8	45	10	8	23
1	0	3	40	1	55	27	3	55	25	6	4	22	8	12	54	10	12	12
2	0	7	20	1	59	17	3	59	36	6	8	43	8	17	3	10	16	0
3	0	11	0	2	3	8	4	3	48	6	13	5	8	21	11	10	19	48
4	0	14	41	2	6	59	4	8	0	6	17	26	8	25	19	10	23	35
5	0	18	21	2	10	51	4	12	13	6	21	48	8	29	26	10	27	22
6	0	22	2	2	14	44	4	16	26	6	26	9	8	33	31	10	31	8
7	0	25	42	2	18	37	4	20	40	6	30	30	8	37	37	10	34	54
8	0	29	23	2	22	31	4	24	55	6	34	51	8	41	41	10	38	40
9	0	33	4	2	26	25	4	29	10	6	39	11	8	45	45	10	42	25
10	0	36	45	2	30	20	4	33	26	6	43	31	8	49	38	10	46	9
11	0	40	26	2	34	16	4	37	42	6	47	51	8	53	31	10	49	53
12	0	44	8	2	38	13	4	41	59	6	52	11	8	57	52	10	53	37
13	0	47	50	2	42	10	4	46	16	6	56	31	9	1	53	10	57	20
14	0	51	32	2	46	8	4	50	34	7	0	50	9	5	53	11	1	3
15	0	55	14	2	50	7	4	54	52	7	5	8	9	9	53	11	4	46
16	0	58	5	2	54	7	4	59	10	7	9	26	9	13	52	11	8	28
17	1	2	40	2	58	7	5	3	29	7	13	44	9	17	50	11	12	10
18	1	6	23	3	2	8	5	7	49	7	18	1	9	21	47	11	15	52
19	1	10	7	3	6	9	5	12	9	7	22	18	9	25	44	11	19	34
20	1	13	51	3	10	12	5	16	29	7	26	34	9	29	40	11	23	15
21	1	17	35	3	14	15	5	20	49	7	30	50	9	33	35	11	26	56
22	1	21	20	3	18	19	5	25	9	7	35	5	9	37	29	11	30	37
23	1	25	6	3	22	23	5	29	30	7	39	20	9	41	23	11	34	18
24	1	28	52	3	26	29	5	33	51	7	43	34	9	45	16	11	37	58
25	1	32	18	3	30	35	5	38	12	7	47	47	9	49	9	11	41	39
26	1	36	25	3	34	41	5	42	34	7	52	0	9	53	1	11	45	19
27	1	40	12	3	38	49	5	46	55	7	56	12	9	56	52	11	49	0
28	1	44	0	3	42	57	5	51	17	8	0	24	10	0	43	11	52	40
29	1	47	48	3	47	6	5	55	38	8	4	35	10	4	33	11	56	20
30	1	51	37	3	51	15	6	0	0	8	8	45	10	8	23	12	0	0

The time of the southing or meridian transits of the fixed stars in par 46, may be found thus. On the noon of the day, preceding the night in which you want to know the time of the southing of any of those stars, find the Sun's place in the Ephemeris; and with it take one of the above table his right ascension in time; this you may do by inspection to a minute; which will be sufficient for your present purpose. Then from the right ascension of the star in par 46, subtract the right ascension of the Sun; the remainder will be the estimate time of the star's southing, and will not differ from the true time above 2 or 3 minutes at most, which may be near enough for ordinary uses. But when great exactness is required, reduce the Sun's place to this estimate time, and with it find in the above table his right ascension to seconds, which being subtracted from that of the star, the remainder will be the

Obliquity of the Ecliptic being $23^{\circ} 28'$.

Deg.	α			μ			γ			δ			ϵ			ζ		
	h	m	s	h	m	s	h	m	s	h	m	s	h	m	s	h	m	s
0	12	0	0	13	51	37	15	51	15	18	0	0	20	8	45	22	8	23
1	12	3	40	13	55	27	15	55	25	18	4	22	20	12	54	22	12	12
2	12	7	20	13	59	17	15	59	36	18	8	43	20	17	3	22	46	0
3	12	11	0	14	3	8	16	3	48	18	13	5	20	21	11	22	19	48
4	12	14	41	14	6	59	16	7	0	18	17	26	20	25	19	22	23	35
5	12	18	21	14	10	51	16	12	15	18	21	48	20	29	26	22	27	22
6	12	22	2	14	14	44	16	16	26	18	26	9	20	33	31	22	31	8
7	12	25	42	14	18	37	16	20	40	18	30	30	20	37	37	22	34	54
8	12	29	23	14	22	31	16	24	55	18	34	51	20	41	41	22	38	40
9	12	33	4	14	26	25	16	29	10	18	39	11	20	45	45	22	42	25
10	12	36	45	14	30	20	16	33	26	18	43	31	20	49	48	22	46	9
11	12	40	26	14	34	16	16	37	42	18	47	51	20	53	51	22	49	53
12	12	44	8	14	38	13	16	41	59	18	52	11	20	57	52	22	53	37
13	12	47	50	14	42	10	16	46	16	18	56	31	21	1	53	22	57	20
14	12	51	32	14	46	8	16	50	34	19	0	50	21	5	53	23	1	3
15	12	55	14	14	50	7	16	54	52	19	5	8	21	9	53	23	4	46
16	12	58	57	14	54	7	16	59	10	19	9	46	21	13	52	23	8	28
17	13	2	40	14	58	7	17	3	29	19	13	44	21	17	50	23	12	10
18	13	6	23	15	2	8	17	7	49	19	18	1	21	21	47	23	15	52
19	13	10	7	15	6	9	17	12	9	19	22	18	21	25	44	23	19	34
20	13	13	51	15	10	12	17	16	29	19	26	34	21	29	40	23	23	15
21	13	17	35	15	14	15	17	20	49	19	30	50	21	33	35	23	26	56
22	13	21	20	15	18	19	17	25	9	19	35	5	21	37	29	23	30	37
23	13	25	6	15	22	23	17	29	30	19	39	20	21	41	23	23	34	18
24	13	28	52	15	26	29	17	33	51	19	43	34	21	45	16	23	37	58
25	13	32	38	15	30	35	17	38	12	19	47	47	21	49	9	23	41	39
26	13	36	25	15	34	41	17	42	34	19	52	0	21	53	1	23	45	19
27	13	40	12	15	38	49	17	46	55	19	56	12	21	56	53	23	49	0
28	13	44	0	15	42	57	17	51	17	20	0	24	22	0	43	23	52	40
29	13	47	48	15	47	6	17	55	38	20	4	35	22	4	33	23	56	20
30	13	51	37	15	51	15	18	0	0	20	8	45	22	8	23	24	0	0

the true time of the star's culminating or southing. And if from the time of the star's southing you subtract the semidiurnal arc belonging to it, the remainder will be the time of the star's rising; and being added to it, the sum will be the time of its setting.

Annexed is an Ex. of SIRIUS for Jan. 31, 1796.

☉'s place at noon	$11^{\circ} 27'$	h	m	s
Rt. Asc. of Sirius		6	35	58
☉'s rt. asc. subtract		20	55	39
*'s estimate southing		9	49	19
☉'s rt. asc. at that time sub.		20	57	16
*'s true southing		9	38	42
Semid. arc 44b. & add		4	36	55
*'s rising aftern.		5	04	47
*'s setting		14	15	37

A Table of the mean Right-Ascensions in time, Semidurnal-Ares, Declinations, and Magnitudes of 40 remarkable fixed Stars, with their Names, and Bayer's Literal Characters, for January 1, 1790.

Names of the Stars	Ch.	Rt. Asc.			Declination	Semid Ar.	Ma
		h m s			° ' "	h m s	
Pole star, Alruccabah	α	0	48	57	88 11 24 n	sets not 2	
Andromeda's girdle, Mirach	β	0	57	43	34 29 47 n	10	7 32 2
Andromeda's left foot, Almach	γ	1	51	10	41 18 41 n	sets not 2	
Ram's following horn	α	1	55	18	22 27 43 n	8	9 35 2
Whale's jaw, Menkar	α	2	51	19	3 15 11 n	6	19 48 2
Medusa's head, Algol	β	2	54	32	40 7 41 n	sets not 2	
Perseus's right side, Algenib	α	3	9	26	49 7 6 n	sets not 2	
Brightest of the 7 stars	α	3	35	22	23 26 22 n	8	16 40 3
Bull's south eye, Aldebaran	α	4	23	51	16 4 19 n	7	28 51 1
Auriga's left shoulder, Capella	α	5	1	11	45 46 57 n	sets not 1	
Orion's left foot, Rigel	β	5	4	27	8 27 38 s	5	20 28 1
Bull's north horn	β	5	12	57	28 25 12 n	8	57 12 2
Orion's left shoulder, Bellatrix	γ	5	13	54	6 8 50 n	6	34 41 2
Orion's girdle	δ	5	25	32	1 21 22 s	5	56 42 2
Orion's right shoulder, Betelgeuse	α	5	43	46	7 21 2 n	6	40 58 1
In the great Dog's mouth, Sirius	α	6	35	58	16 25 8 s	4	36 55 1
Head of the 1st Twin, Castor	α	7	21	11	32 19 57 n	9	38 21 1
In the less Dog's thigh, Procyon	α	7	28	21	5 46 33 n	6	32 50 1
Head of the 2d Twin, Pollux	β	7	32	30	28 31 19 n	8	58 13 2
Hydra's heart, Alphard	α	9	17	15	7 45 30 s	5	24 20 2
Lyon's heart, Regulus	α	9	57	11	12 58 43 n	7	11 28 1
Great Bear, Lower Pointer	β	10	49	4	57 30 19 n	sets not 2	
Great Bear, Upper Pointer	α	10	50	39	62 53 25 n	sets not 2	
Lion's tail, Deneb	β	11	38	24	15 44 22 n	7	27 18 2
Great Bear, 1st in the tail, Aliath	δ	12	45	5	57 7 0 n	sets not 2	
Virgius's spike	α	13	14	10	10 3 38 s	5	12 20 1
Dragon's tail	α	13	58	42	65 20 53 n	sets not 2	
Bootes, Arcturus	α	14	6	11	20 20 20 n	7	55 26 1
Libra, Southern Scale	α	14	39	22	15 9 30 s	4	44 23 2
Libra, Northern Scale	β	15	5	47	8 36 4 s	5	10 57 2
Bright star in the North Crown	α	15	25	49	27 25 35 n	8	48 36 2
Scorpion's heart, Antares	α	16	16	35	25 56 54 s	3	34 6 1
Hercules's head, Ras. Algethi	α	17	5	7	14 38 4 n	7	26 41 2
Head of Serpentarius	α	17	25	8	12 43 20 n	7	9 50 2
Dragon's head, Rastaben	γ	17	51	51	51 31 28 n	sets not 2	
Bright star in the Harp, Lyra	α	18	29	45	38 35 39 n	sets not 1	
Bright star in the Eagle, Atair	α	19	40	25	8 18 55 n	6	45 57 2
Mouth of south Fish, Fomalhaut	α	22	45	53	30 43 12 s	2	52 6 1
Pegasus's wing, Markab	α	22	54	15	14 4 11 n	7	17 10 2
Andromeda's head	α	23	57	29	27 55 38 n	8	52 19 2

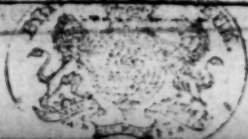
A Table of the Longitudes, Latitudes, and Magnitudes of the most remarkable fixed Stars that the Moon can Eclipse, or make a near Appulse unto; exactly rectified to the beginning of the year 1790.

Con.	Cha.	Long.	Lat.	Magn.	Con.	Cha.	Long.	Lat.	Magn.
♌	♈	0 1 11	0 1 44 n	4	♌	♈	12 9 29	0 21 48 n	3
	♈	14 36 25	1 5 37 n	4	♌	♈	18 4 37	1 49 14 s	3
	♈	16 36 25	0 13 11 s	4	♌	♈	22 12 5	4 24 41 n	3
♍	♈	17 54 44	1 48 7 n	4	♌	♈	24 16 33	4 2 52 n	4
♎	♈	27 3 44	4 1 36 n	3	♌	♈	24 49 47	0 1 1 n	4
♏	♈	2 52 0	5 45 30 s	3	♌	♈	26 56 12	3 29 24 n	4
	♈	5 31 37	2 35 37 s	3	♌	♈	27 32 46	0 6 53 n	4
	♈	6 31 20	5 29 2 s	1	♌	♈	29 38 28	1 57 17 s	3
	♈	19 38 37	5 21 59 n	2	♌	♈	0 0 35	5 26 15 s	3
	♈	21 51 15	2 13 29 s	3	♌	♈	0 15 33	1 2 18 n	2
♐	♈	0 30 37	0 55 4 s	4	♌	♈	1 42 50	1 39 50 n	4
	♈	2 22 2	0 50 34 s	3	♌	♈	4 52 13	4 0 23 s	4
	♈	5 10 20	6 46 12 s	2	♌	♈	6 49 58	4 32 17 s	1
	♈	7 0 30	2 2 28 n	3	♌	♈	8 31 42	6 5 21 s	4
	♈	15 35 29	0 12 19 s	3	♌	♈	28 20 3	6 56 48 s	3
	♈	20 19 34	6 40 4 n	1	♌	♈	0 16 58	2 22 24 n	4
♑	♈	4 36 51	3 10 22 n	4	♌	♈	3 23 31	2 5 31 s	4
	♈	5 47 9	0 4 13 n	4	♌	♈	7 14 48	3 55 22 s	3
♒	♈	18 43 23	3 1 57 s	4	♌	♈	9 27 17	3 24 55 s	3
	♈	21 19 38	3 46 1 s	4	♌	♈	11 54 32	5 2 33 s	3
	♈	24 58 23	4 51 9 n	4	♌	♈	12 3 36	0 53 36 n	3
	♈	26 54 49	0 27 37 n	1	♌	♈	13 19 21	1 28 7 n	4
	♈	3 27 25	0 8 29 n	4	♌	♈	1 6 55	4 36 46 n	3
	♈	18 34 47	0 31 21 s	4	♌	♈	17 16 0	4 57 31 s	4
	♈	22 6 32	3 2 51 s	4	♌	♈	18 50 53	2 32 6 s	4
♓	♈	24 10 47	0 41 36 n	3	♌	♈	20 36 5	2 33 40 s	3
	♈	0 26 10	5 4 42 n	3	♌	♈	25 47 17	2 3 47 s	4
	♈	1 54 16	1 22 24 n	3	♌	♈	0 19 42	2 43 22 n	4
	♈	7 14 41	2 48 57 n	3	♌	♈	8 38 43	0 22 57 s	4
	♈	20 54 50	2 2 11 s	1	♌	♈	14 12 39	1 2 8 s	4

This table shewing the mean longitudes of 60 stars to the beginning of the year 1790, their mean longitudes for any other time may be found if $50\frac{1}{2}$ seconds be added for each succeeding, and subtracted for each preceding year, and proportionably for a part of a year. Thus, to find the longitude of the first star ♌♈, or ♈ piscium, for Feb. 15, 1792, or 2 years and one eighth after the tabular time; here $2\frac{1}{8}$ times $50\frac{1}{2}$ sec. make $1^{\circ} 47'$, which being added to the tabular longitude, gives ♌♈ $11^{\circ} 14' 58''$ for the longitude required at the given time. — The latitudes vary not.

The Latitudes and Longitudes of Ninety Places.

	Lat.	Long.		Lat.	Long.
Alexandria, Egypt	31 11 n	30 17 e	Isfahan	32 25 n	52 55 e
Amsterdam, Hol.	52 23 n	4 52 e	Land's end	50 6 n	5 50 w
Archangel, Ruf.	64 34 n	38 30 e	Laghorn	43 33 n	10 25 e
Athens	37 40 n	23 52 e	Leostoff	52 38 n	1 54 e
Babelmandel	12 50 n	43 50 e	Leverpool	53 22 n	3 10 w
Batavia	6 12 s	106 45 e	Lima	12 1 s	76 50 w
Bengal	22 0 n	92 45 e	Lisbon	38 42 n	9 4 w
Berlin	52 33 n	13 26 e	Lizard	49 57 n	5 21 w
Bombay-Ile	19 42 n	73 3 e	London	51 31 n	0 0
Boston, Amer.	42 25 n	70 37 w	Madras	13 8 n	80 7 e
Breslau	51 3 n	17 13 e	Madrid	40 25 n	3 45 w
Brest	48 23 n	4 30 w	Manilla	14 30 n	120 25 e
Bristol	51 28 n	2 30 w	Marseilles	43 18 n	5 21 e
Buenos Ayres	34 35 s	58 0 w	Mexico	19 54 n	100 5 w
Cadix	36 31 n	6 7 w	Mississipi, mouth	29 0 n	89 17 w
Calais	50 58 n	1 51 e	Moscow	55 25 n	37 51 e
Cairo, Egypt	30 2 n	31 26 e	Naples	40 51 n	14 19 e
Cambridge	52 13 n	0 4 e	Newcastle	55 0 n	1 18 w
Canaria Islands	28 1 n	15 0 w	Oporto	40 53 n	8 35 w
Canton	23 8 n	113 2 e	Orkney I. north bend	59 24 n	3 23 w
Cape of Goodhope	34 29 s	18 23 e	Oxford	51 45 n	1 16 w
Cape Horn	55 59 s	67 26 w	Paris	48 50 n	2 25 e
Carthegena	10 27 n	75 26 w	Pekin	39 55 n	116 22 e
Charles Town Am.	33 22 n	79 50 w	Petersburg	59 56 n	30 19 e
Constantinople	41 0 n	28 53 e	Philadelphia	39 57 n	75 18 w
Copenhagen	55 41 n	12 50 e	Plymouth	50 24 n	4 13 w
Corinth	37 30 n	23 0 e	Port Mahon	39 51 n	3 53 e
Corke	51 54 n	8 30 w	Port Royal, Jam.	17 40 n	76 37 w
Dantzic	54 22 n	18 36 e	Portsmouth	50 48 n	1 1 w
Dover	51 7 n	1 19 e	Prague	50 5 n	14 15 e
Dublin	53 20 n	6 55 w	Quebec	46 55 n	71 12 w
Edinburgh	55 58 n	3 1 w	Rome	41 54 n	12 32 e
Ferro, Ile	27 48 n	18 6 w	Scilly Isles	50 0 n	6 45 w
Finisterre, Cape	42 57 n	9 36 w	Smyrna	38 28 n	27 25 e
Genoa	44 25 n	8 41 e	Stockholm	59 22 n	18 12 e
Gibraltar	36 5 n	4 46 w	Syracuse	37 4 n	15 20 e
Glasgow	55 52 n	4 5 w	Tangier	35 55 n	5 45 w
Goa	15 31 n	73 50 e	Teneriff	28 16 n	16 32 w
Gortingen	51 32 n	9 58 e	Tunis	36 47 n	10 16 e
Greenwich	51 29 n	0 5 e	Turin	45 5 n	7 45 e
Hacluit's Head	79 55 n	12 0 e	Venice	45 27 n	12 24 e
Halifax, America	44 46 n	63 20 w	Verd, Cape	14 47 n	17 28 w
Havanna	23 12 n	81 11 w	Vienna	48 11 n	16 28 e
Helena, I. St.	15 55 s	5 49 w	Upsal	59 52 n	17 43 e
Jerusalem	31 50 n	35 25 e	Uraniberg	55 54 n	12 52 e



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